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Defense Motif in Textile Styles

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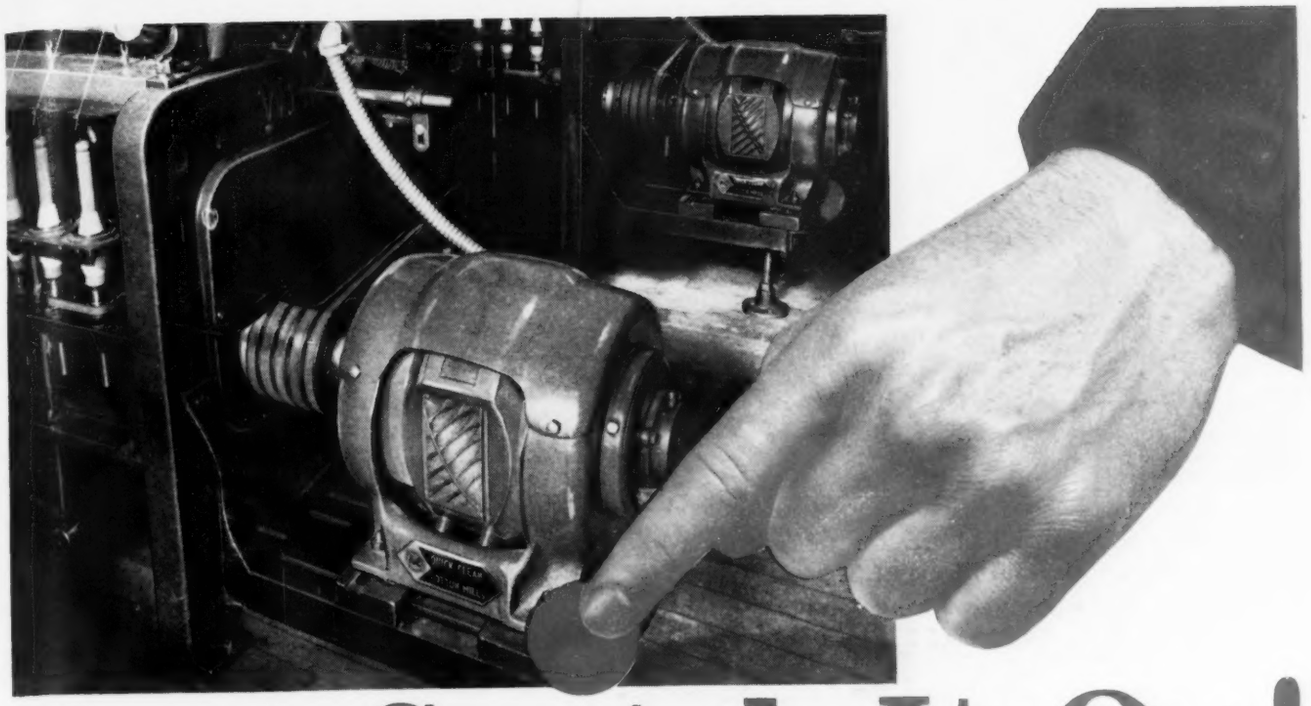

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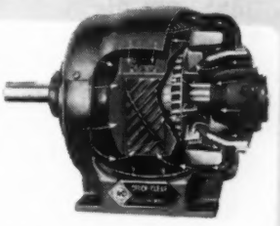

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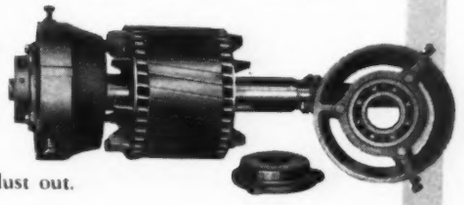

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# May 1916

## *Comments by Henry G. Lord*

The other day I had occasion to look up a copy of the May 1916 issue of TEXTILE WORLD and was much interested in the account of the Knit Goods Convention of 25 years ago.

That was the year before the United States entered the World War No. 1.

One of the sessions of the convention was a "Preparedness Meeting," where pleas for industrial, as well as naval and military, preparedness were made.

Mr. Albert N. Hogg, a banker, was the opening speaker and his statement that "manufacturers know next to nothing about cost analyses," did not evoke much enthusiasm, which is hardly to be wondered at.

The Hon. Charles N. Fowler, ex-Congressman of New Jersey, declared that "the first step toward preparedness is the development of a national spirit." He said that "the time had come when each individual should be the friend of his neighbor, not only in the same business, but in other lines of business." He was firm in his conviction that the American market should be reserved for the American manufacturer. That was before the "Good Neighbor" policy had been exploited.

"What will happen after the war?" he asked. "Do you expect to hold the South American trade that has been developed since the war started? Will you be able to compete in these markets with the Germans after the war is over? You can keep the foreign trade that you have developed just as long as you give buyers in these markets goods that they want and at a cheaper price and on longer credits than the European nations."

All of this sounds quite natural. It might have been said last week.

The immediate difficulty confronting manufacturers in May 1916 was getting necessary materials. The European war had shut out much-needed dyestuffs, knitting needles and fine yarns. The dyestuff supplies had been pretty nearly cleaned out and a proposed shipment of 15,000 tons from Germany was anxiously awaited. Domestic sulphur blacks and logwood dyes were being used and foundations for the American dyestuff industry were being laid.

The allocation of available knitting needles was another big problem, as a large proportion of the knitting needles used at that time were imported from Germany. The shipment became so acute that a large shipment of both needles and dyes was sent over by a German submarine. The war made it necessary for American shops to supply the needle requirements of American manufacturers. They are still doing it.

The importation of fine yarns, which were largely used in the knit goods trade at that time, was cut off by the war and led to the expansion of that branch of the American cotton spinning industry.

It is interesting to note how war effects industry permanently. When, in 1966, some one is looking over a copy of the May 1941 TEXTILE WORLD, I wonder what the textile manufacturers will be worrying about then?

HENRY G. LORD, *founder of Textile World and president, Bragdon, Lord & Nagle Division, McGraw-Hill Publishing Co.*

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# Textile World

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**NEW ERA IN NEW ENGLAND** will be the subject of the feature section of the June issue of TEXTILE WORLD. It will survey and evaluate the comeback of the textile industry in that section, which has been marked by the rejuvenation of older mills and the influx of new enterprises. Among the phases of this subject to be covered are: New Enterprises in Old Mills; New Industries; The Growing Rayon Weaving Industry; The Effect of Defense Orders; Data on Employment; The Arrest of the Exodus of Mills; New Manufacturing and Merchandising Ideas. In addition there will be case studies of modernization programs and of new establishments.

* * *

**Index to the 1940 issues of TEXTILE WORLD is now available. The editors will be glad to send this index to any reader free on request.**

TEXTILE WORLD

DOUGLAS G. WOOLF, Editor

# Booms and Boomerangs

**THE SPEED** with which the textile committee and the hosiery committee made their recommendations for new wage minima under the wage-hour law was laudable, under the circumstances. No good could have come out of delay. On the contrary, much harm could have resulted—in the form of antagonism between management and labor, inimical to the progress of the defense program, and antagonism among sections of the industry, potentially more harmful. The action of the committees met the broad specifications set down in these columns last month.

Now that the industry has these new minima—and their ratification is a foregone conclusion—what will labor and management do with them?

**FIRST** labor should realize that it has achieved this latest gain at the point of a gun, so to speak. It has taken advantage of a temporary bulge to add to the already great gains it has made in recent years. From a trading standpoint, such action is entirely legitimate. But the really smart trader is the one who knows when to stop. He recognizes the possible disparity between a nominal price and the actual volume of sales he can make at that price. If the former goes too high, he knows that the latter will dry up.

Textile labor is selling hours of work. If the price per hour becomes excessive, the number of saleable hours becomes restricted, proportionately. We are thinking now, not of the present boom conditions, but of the period of reaction which will inevitably follow.

If the public *had* to buy a certain volume of textiles every year, then textile labor could ask any price for its services it chose, and the industry could demand any price for its product it found necessary to yield a profit.

But thus far there has been no law enacted *forcing* people to buy textiles. Possibly some starry-eyed brain-truster will get around to that some day. Meanwhile, men can buy fewer shirts and suits; women can buy fewer dresses and towels.

More important than that, by far, is the fact that all the relatively new competitors of textiles—paper products, plastics (see page 62), and what have you—will encroach further upon the market, not only for textile products but for textile labor, with every advance in textile costs. And, believe it or not, that threat from other industries has only begun.

There is still another consideration. Every increase in basic labor costs, beyond a point of parity with competing products, *forces* the adoption of labor-saving equipment, devices, and methods.

In other words, beyond a certain point increases in wage minima become a boomerang against the very groups the wage-hour law was designed to aid.

Those organizations which presume to speak for textile labor—and it is still largely presumptuous on their part—might think a bit about these things. They might study the record of the construction and allied industries in the last depression, when would-be workers "enjoyed" a high nominal wage but couldn't get enough hours of work per year to supply food and lodging.

One more warning to labor: If Hitler wins this war, it's going to be much tougher on labor than on management. As we stated last month, a totalitarian state can get along without labor unions but not without some semblance of industrial organization. So, labor has a selfish interest in furthering the defense program.

Finally, the industry itself might consider what it's going to do about these new wage minima, when the next depression comes. Remember, it is always just around the corner.

As one who has preached for years the desirability of a floor under wages and a ceiling over hours, this writer sees in the present situation a chance to stabilize textile economics. Let's take the ultimate, which is in the cards: a 40c minimum. This still can be used constructively, if the industry doesn't start to give away its shirt when demand slackens; if the industry will take every step to increase its efficiency; and if the industry will push aggressively for the maintenance of its present markets and for the development of new outlets, through research.

One more thing the industry as a whole must do is to lend every support to the suppression of the wage chiseler. With certain wage minima on the books, everybody must be forced to pay them.

**AS WE HAVE STATED BEFORE** on this page, all this sounds academic at the moment. But only a fool can imagine that the present situation is permanent; that we have found, through war, a key to everlasting prosperity.

The wise man—whether he be textile employer, textile employee, or textile-union official—will know that a minimum wage adopted under boom conditions can prove to be merely a boomerang. And he will start planning, now, to deaden the repercussion.

Douglas G. Woolf

# THE EDITOR SAYS

## The Zero Hour Approaches

The Zero Hour for America approaches. Each week the world crisis moves nearer total collapse. Practically the entire Continent of Europe is now in the hands of Hitler or his satellites. Much of Asia is threatened from the same source.

On the credit side of the ledger, Great Britain still stands. And anyone who listened to Churchill's speech on April 27 knows how much of an asset the stand of that country means to the world. It is heroism at its very finest—without flamboyance, without deceit. But Britain's plight is desperate—both at home and on the seas.

Where do we go from here?

**1.** We must make up our minds that any previous decision re staying out of the war was made under previous conditions, and therefore subject to change.

**2.** We must accept the fact that we *are* in a state of war, even if undeclared.

**3.** We must come to the realization that war demands an all-out psychology.

**4.** We must accept the fact that when a country is at war, all *must* support the country's effort in that war. Those who still believe that it wouldn't make much difference if the Nazis win the war must be willing to stand up and be counted with the Bund. Because it *does* matter, very much. It means the difference between the type of life this country has stood for and the type of life Hitler stands for. And we know of no greater gulf.

**5.** We must continue to enforce the will of the majority that aid to Great Britain is our most effective prosecution of this undeclared war. When Britain suffers reverses, too many hind-sight experts are ready to declare that we would be better off if we saved our planes and munitions and materials for the defense of our own shores. That view is both stupid and selfish. It is stupid because aid to Great Britain is our most effective form of defense. It is selfish because, even if such aid becomes more and more expensive, we have a promise to our ally which we must perform. That's what the lend-lease bill and similar legislation meant and still mean. If we let Great Britain down, just because the risk of giving aid there becomes greater, we would merely be playing the Nazi game.

Anyone who wants that game can have it; the majority of Americans don't want it.

**6.** We must be ready to face bombs over America. This is not a war like that one we fought in 1917–18. It is not one that can be kept from our shores, if the Nazis get domination of the rest of the world. We must be ready for our own blood and sweat and tears. The enemy is much nearer than the isolationists would want us to believe. Even if the latter are sincere, they are merely playing ostrich, and that's a dangerous game in war-time.

**7.** Suppose we take a leaf from the story of Europe and try *not* to be too late with each move. We may have been just a little too late in Greenland. But that's no reason why we have to keep on being too late. There is still time, but precious little of it.

**8.** A United States Senator said recently that the giving of one American sailor's life was too great a price to pay for the salvation of Great Britain. If that had been this nation's sense of values, there would have been no American Republic, no Union, no land of freedom. Many of us fought in the last World War, or have ancestors who fought in the other wars in which America participated. We must be ready for sacrifice again—and at a time when freedom has its back to the wall.

It's all-out now, as we approach America's Zero Hour.

## The Country's Afraid Of the Big Bad Wolf

Strange as it may seem, the country is scared to death of organized labor right now. By the "country" we mean that articulate part of it that has to do with making laws, running the Administration, and prosecuting the defense program. There are a few intrepid souls in the legislative branch and in the OPM, but by and large Washington has capitulated to a pressure group. And the fear engendered there has spread to all sections of the country.

If there is one sure way to defeat our belated attempt toward preparedness and to make our future less secure in the increasingly horrible world situation in which we find ourselves not only embroiled but potentially the No. 1 target of the dictators, it is to yield to the will of a minority.

And remember this *is* a minority we are talking about. It is not the rank and file of American workers. They are not a minority; in the factory and on the farm they compose the great majority. They *are* America.

But the pressure group which has this country by the ears is the organization which presumes to speak for labor. It happens right now to be two organizations but, while one is more articulate and more demanding than the other, either one or both can scare the pants off any legislator, any administrator, or any combination of both.

The result is not left to the imagination; it is here. Leon Henderson can crack down on the steel industry, and "freeze" prices at a certain level without rhyme or reason, but neither Leon Henderson nor anyone else dares to do a thing about wage-spiraling. The Government has the power to force allegedly non-cooperative industries to do their part, but no agency of the Government dares to force organized labor to refrain from obstructive tactics.

The sad fact remains that unreasonable wage advances *make* unreasonable costs, and that costs thus thrown out of line necessitate rising prices. The still sadder fact remains that a strike in a plant like Allis-Chalmers, to use just one example, can delay the entire defense program to a degree infinitely more perilous than can the non-cooperative attitude of a few industrial concerns.

More than that, the Government is not the least bit afraid of industry. And for a good reason. There is no group in management which presumes to speak for American business, in the way that the CIO and the AF of L presume to speak for American labor. The latter two organizations would probably point to the National Association of Manufacturers, in attempting to reply to this statement. Actually, the NAM neither can, nor tries to, exert the coercive force which the CIO and the AF of L wield.

And in the Government itself, there are two agencies—the Department of Labor and the National Labor Relations Board—which fight constantly for labor, and perforce for organized labor. The one agency which might be counted on to fight for business—the Department of Commerce—is a joke so far as any real representation of the industry point of view is concerned.

In Congress, any statement made before one of its committees by a representative of organized labor is enough to make the members of the particular

committee run to cover. A similar statement made by a representative of industry is apt to be just another joke. This statement is not made lightly; it is the composite impression of years of personal attendance at committee hearings.

In ordinary times, this disparity of influence is not too important. Today, it may mean the difference between American freedom and capitulation.

In such a situation, what can be done about it? Here are a few suggestive answers:

**1.** The appointment of a *separate* agency in OPM which will have the same power to "freeze" wages as Leon Henderson's agency has to "freeze" prices.

**2.** The enactment of a law which would make a 30-day cooling-off period mandatory before a strike is declared. This would not impair the right of labor to strike; it would merely impair the right of *organized* labor to use this national emergency as an excuse for selfish exploitation of its own ends. And, parenthetically, its own ends are often diametrically opposed to the ends of the rank and file of American workers for whom it presumes to speak.

**3.** The re-organization of the Department of Commerce so that industry will have a real and permanent spokesman in Government. Not the type of reorganization recently effected, which made old and valued Government servants pawns in a new chess-game, but the type which would revitalize the Department to the status to which Herbert Hoover raised it.

This is not an academic question. It is one which affects every man, woman and child in this country.

It affects the American worker most of all. He is being used unwittingly as a scapegoat in the struggle by labor organizations to make defense an excuse for personal aggrandizement. He has more to lose by the collapse of American democracy than any other individual.

It affects every man who has been drafted into military service, and his family. He is called upon to sacrifice, often, his job, his chance for advancement—and rightly so, under the democratic system of government. But how do he and his family feel about the labor groups who use this emergency, not as a time for sacrifice, but as a time for exploitation?

It affects every business-man. He has to pay through the nose, in excess-profits tax, in "freezing" of prices, and in surrender to dictatorial "labor" agencies of the Government. "Labor," as the CIO and AF of L see it, never has to pay; it merely takes.

There can be no all-out defense program in this country until all the major groups in our economy go all-out. Industry *has* to go all-out—or else! Labor (again referring to its so-called representatives) not only doesn't have to go all-out; it can hold up every branch of the defense program until it gets what, at the moment, it demands. And at the next moment, it can and will demand something else.

When will this country wake up to this situation, and demand of this pressure group the same cooperation it exacts from all other groups?

Not too late, this writer hopes. But anything less than immediately may be too late, if we read the war news correctly.

## Watch for the Caution Light!

If any official in the OPM, or in Leon Henderson's new price-control outfit, thinks the textile industry is holding out on production, in order to create an artificial scarcity and thereby an inflated price-structure, let him read the first-quarter report of textile-mill activity on page 65 of this issue. All records have gone by the boards. TEXTILE WORLD's index, based on 1923–25 as 100, reached an all-time high of 175, against the previous successive records of 132 and 142 for 1939 and 1940, respectively. If the rest of the year goes on, as has the first quarter, this year's textile output will be almost unbelievable. And there's no sign of any letdown!

In fact, that is what worries this writer. He is not afraid of scarcity; he's afraid of glut.

This phenomenal production is not merely to take care of defense needs. The Quartermaster General himself, at Augusta, estimated those needs at 35% of current backlog in wool manufacture and 25% in cotton. The balance is partly in response to civilian needs arising out of a greatly enhanced national purchasing power, and partly—we fear—in response to hope. As the months go on, the percentage of actual needs may decline, and the percentage of hope increase.

Will the industry stop, when that bend of the curve arrives? The answer, based on past performance, is no. Look back to 1937. In that year, those who urged caution were black-listed as killjoys.

At the risk of earning such an unpleasant title, this writer suggests that somewhere along the line the slogan should be "Stop, look and listen!" Stockpiles of unwanted goods will be of no use to the defense program; they will merely mean potential losses to textile management and labor.

No one can place this deflection point accurately, under present unprecedented conditions. But everyone can, and should, be on the lookout for it.

This industry hasn't found permanent prosperity. If it kids itself about it, it will find once again that it pays with depression.

This is merely an advance notice. The caution light has not really flashed yet. It *will* flash, sometime within the next several months. Watch out for it!

## Letters to the Editor

NEW YORK, N. Y.

Editor, TEXTILE WORLD:

The editorial in your April issue on "Solving the Great Textile Mystery" properly calls to task the purveyors of superficial and unwarranted comments on the textile industries. In the woven cloth division, production has already reached heights that seemed unattainable. Cotton consumption for April will probably make a new all-time record of over 900,000 bales. Besides the expansion of three-shift operations, a number of mills are operating on Saturdays with extra costs to supply a demand that is bolstered by the efforts of all customers to accumulate inventory. There is no certainty that prices now being paid for next fall's production will look attractive in the light of increased costs for wages, cotton, fuel, supplies, equipment and taxes.

W. RAY BELL, President, *The Association of Cotton Textile Merchants of New York*

*Editor's Note:* We are particularly glad to have Mr. Bell's comment because, through his service as textile adviser to the OPM, he knows what he's talking about!

* * *

ATLANTA, GA.

Editor, TEXTILE WORLD:

Have just received a copy of your March issue. Congratulations to you as editor for having sincerely expressed the feelings of those who have either migrated or been transferred to the Southeast. We, like yourself, feel that the textile industry in the South, as a whole, is truly on the up-and-up. It is the opinion of men like yourself who have the influence, prestige and thoughtfulness to aid in a most definite manner the problems which have for the last several decades confronted the South.

WM. H. RANDOLPH, JR., Southern Representative, *A. E. Staley Mfg. Co.*

**Garment bags** of Cellophane serve the double purpose of protection and visibility. Courtesy DuPont. Plastic sheeting also is used for blanket bags and other merchandise containers

**Umbrella covering**—Plastic sheeting is used instead of fabric. Picture shows Pliofilm, a product of Goodyear Tire & Rubber Co. Total weight, including metal frame and plastic handle, is 12½ oz.

# Sheet Plastics Invade Textile

**AMONG IMPORTANT ISSUES** facing the textile industry today is the increasing competition offered by non-textile materials. The advance made by plastics in this respect is particularly significant. To textile manufacturers it represents a challenge which demands two-fold action: First, careful study of the present situation and its implications; and second, concerted effort to improve the quality of present products and develop new uses to offset the encroachment.

The position of plastics with respect to textiles is paradoxical. They are at once a friend and a competitor. To textile finishers, plastics have proved very helpful in developing new finishes and processes which have added to the value and beauty of fabrics, thus stimulating consumption. To weavers and knitters, the advent of strip plastics, notably Cellophane, has opened the way to various new and successful products.

However, a very different picture is presented with respect to sheet plastics. Here textiles face direct and undeniably important competition. In a surprisingly brief period, sheet plastics have won a foothold in numerous markets as a substitute for textiles. The particular significance of this development is that the use of sheet plastics constitutes a broad displacement of textiles. In addition to eliminating the textile fibers in such merchandise, it also dispenses with the major textile operations, such as spinning, weaving, knitting, finishing, etc. The implications to the textile industry are self-evident. With a view to laying the groundwork for study, the subject will be considered here from three aspects: (1) Present and prospective textile uses in which plastics are a factor; (2) Chief sales advantages of plastics in textile markets; and (3) What can the textile manufacturer do about it?

**AS TEXTILE SUBSTITUTES.** The range of textile markets in which sheet plastics already are used is wide and diversified. It includes men's, women's and children's apparel, accessories, house furnishings, footwear, and millinery. Equally important is the growing sale of plastic sheeting as piece goods in stores. This is available in many colors and patterns, the latter including florals, geometrics and novelty designs. Consumers buy such piece goods and apply them to a wide range of uses, including window curtains, drapes, drawer linings, etc. Pliofilm has been particularly successful in this field. The merchandising parallels that of textile piece goods. Indeed, the patterned numbers are termed "prints" in the trade.

Meanwhile, the plastics industry is pushing its research and experimental work, looking to application of the material in other textile fields. Uses now nearing the commercial stage include: Bedspreads, hospital sheeting, lingerie straps, corset laces, sleeve protectors, knee pads, table covers, shower caps, hose supporters, and men's golf shoes.

**SALES ADVANTAGES.** Low manufacturing cost is a major advantage of plastics. This is immediately evident, as elimination of spinning, weaving, knitting, finishing, etc., represents a drastic reduction in outlay. Other sales advantages include: High style appeal through distinctive effects with non-fading colors, stain resistance and easy cleaning, with elimination of laundering costs, light weight, scuff resistance (important in footwear), and—last but not least—the obvious advantage all plastics have of being waterproof. In garment manufacture plastics are usually fastened by solvents or heat-sealing processes. However, sewing also is employed; and it is claimed for plastics that garments of this material hold stitches

**Hats** recently offered by smart designers were either wholly or partially of plastic sheeting. Hat shown here has a wide brim of white cellulose-acetate plastic, a DuPont product

**Raincoats** of plastic sheeting now compete with raincoats made of textiles. Lightness of weight, compactness and low price are the chief selling points. Man's raincoat at right, is of Pliofilm, a Goodyear product

# Markets

well. Plastics may be expected to expand further in any textile markets where the following advantages are important: Water-resistance, color appeal, sponge-cleaning, light weight.

**WHAT TO DO ABOUT IT.** It is easy, of course, to exaggerate the significance of the entry of plastics into the field of textile merchandise. The threat this development implies is much tempered by the rigid limits which the character of plastic sheeting imposes upon its usage. These limits are clear-cut, and, so far as we can immediately see, they are insurmountable. On the other hand, there is sufficient latitude within these limits, for much further expansion of plastics into the textile field than we have seen to date.

For the textile manufacturer, the question is largely one of meeting ingenuity with ingenuity. Intensified laboratory effort, more research and experimental work, expansion of present markets and creation of new ones, development of manufacturing processes that will reduce costs, and acceleration of merchandising activity—these are old phrases, oft repeated, but they are the fundamental route to solution of such problems as this.

*(Continued on next page)*

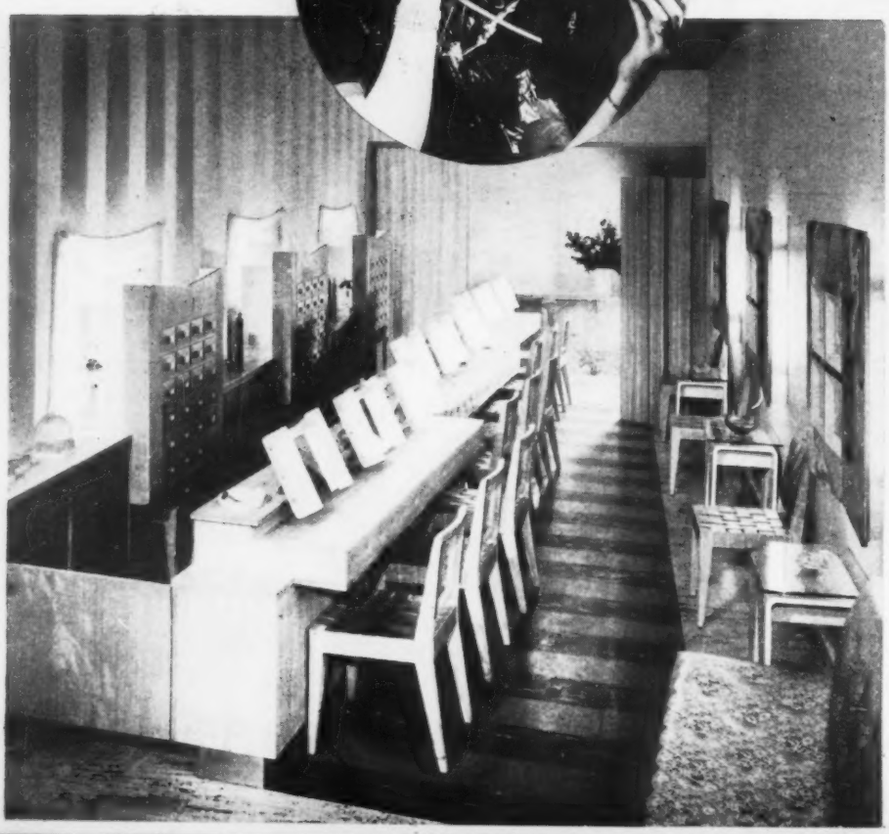
**Shower-curtain** made of "Krene", thermoplastic sheeting, manufactured by National Carbon Co. To clean, wipe with a damp cloth. Manufacturers state it will not crack, peel, or mildew. Window curtains are also available

**Half a century of plastics** in neckwear! Believe it or not, plastics have been competing with textiles since 1881. Celluloid was the first apparel plastic and at left is the celluloid collar, of gaslight era fame. Easy cleaning and low price were the chief sales arguments half-a-century ago, and these remain important sales arguments for plastics in the apparel field today. Celluloid shares the progress made by other plastics in apparel. Accompanying illustration shows celluloid vest and cuff for nun's uniform. Courtesy Celluloid Corp. of America. The Pierre Front Co. is making stiff shirt fronts or dickeys for waiters, bellboys, and men's full-dress apparel of Vinylite

**Belts and suspenders,** made of sheet plastics, are now on sale in men's wear shops. Illustration shows examples made of Vinylite

**In women's footwear** plastics are competing with silk, rayon, velvet and other textiles. A wide range of shoes, slippers and boudoir mules are now on the market. Plastics also are featured in the newer handbags. Picture shows one example (of Vinylite) out of numerous styles on market

**This fly-casting line** is made of Saran, an extruded plastic, a product of Dow Chemical Corp., and Firestone Rubber & Latex Products Co.



**Make-up capes** of plastic sheeting resist stain and are easily cleaned. Cape shown above is made of Pliofilm. Courtesy Richards, Boggs & King, Inc. A line of women's aprons of Vinylite transparent sheeting trimmed with the same material in colors is available

**Interior decoration** of Tourneau Beauty Products, Inc., shop in New York gives three new textile uses to plastics: (1) at extreme left, as drapes to lend soft luminosity to lights; (2) at center, as covering for make-up tables; (3) at lower right, transparent sheeting covers pink satin and lace upholstery on lounge seat. Courtesy *Modern Plastics Magazine*

# Textile Output Hits All-Time High

## First quarter far ahead of 1940 and starts third successive record year

By DOUGLAS G. WOOLF

**THE ALL-TIME RECORD** of textile-mill activity, which took two successive boosts in the years 1939 and 1940, is in for further and far more drastic skyrocketing in 1941, if the first quarter of the present year is a fair sample. That is the story revealed by TEXTILE WORLD's index.

Here, briefly, are the figures in the case: The output for the first quarter of 1941, based on raw-material consumption, was 25% above that for the first quarter of 1940; 35% above that for the first quarter of 1939; and 75% above that for the first quarter of an assumed "normal" year. If the first-quarter rate of activity is maintained for the balance of the year, TEXTILE WORLD's index of textile-mill activity (based on 1923–25 as 100) will reach the amazing figure of 175, as compared with the two previous highs of 132 and 142 for 1939 and 1940, respectively. The record from 1929 through the first quarter of 1941 is shown in the accompanying table.

**TEXTILE WORLD'S Textile Mill Activity Index**

**1923–25 average = 100**

| | |
|---|---|
| 1929 | 115 |
| 1930 | 89 |
| 1931 | 93 |
| 1932 | 83 |
| 1933 | 104 |
| 1934 | 90 |
| 1935 | 105 |
| 1936 | 124 |
| 1937 | 125 |
| 1938 | 103 |
| 1939 | 132 |
| 1940 | 142 |
| 1941 (first-quarter) | 175 |

Under normal conditions, the aforementioned "if" would be a big one. Past performance would promise a sad drop before the year is through. But this year, the setting is different. Unfilled defense orders are still keeping the mills busy. Further defense orders in prospect at the start of the new fiscal year July 1, even if the national emergency does not become more intense, may take up the slack, if any. The further possibility of a sharp increase in the armed forces, all demanding clothing and equipage, makes the "if any" a realistic phrase. Add to that the increasing call for civilian textiles, due again to the boosting effect of the defense program upon national purchasing power, and the sum total is something to think about. •

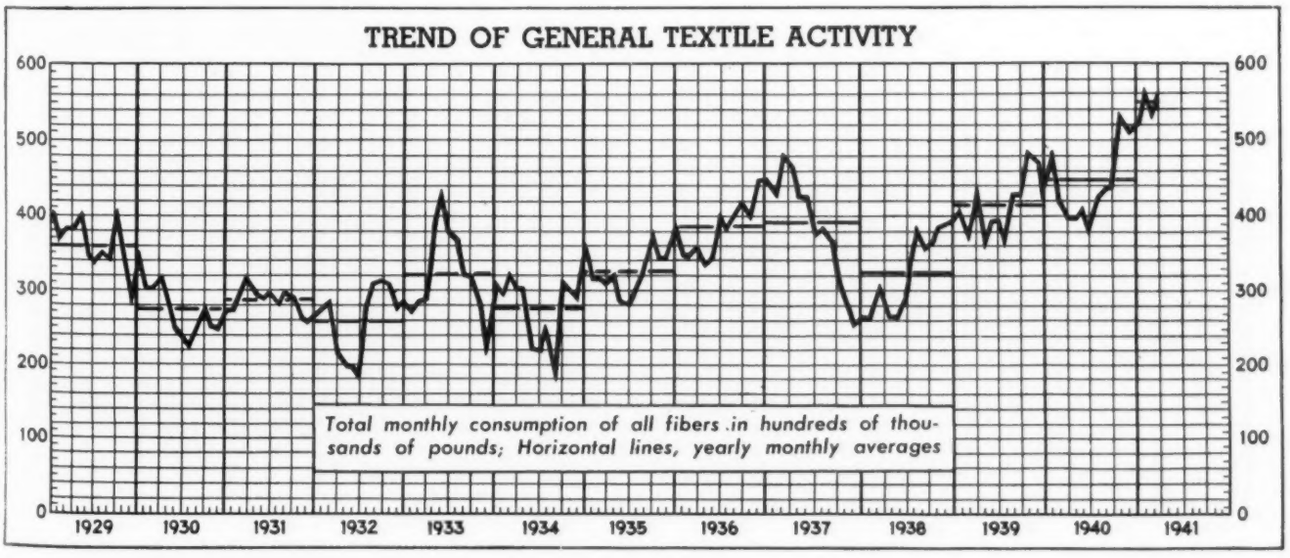
There is no guarantee attached to the continuation of the index figure of 175 throughout the calendar year. But even if it misses that mark, the probability of a new textile-mill activity record in 1941, surpassing the previous highs of 1939 and 1940, is almost a certainty.

Textile manufacturers do not need these figures to convince them that they are busy. But that part of the public which has been fooled by a couple of columnists may need them. They are the final clue to the solution of the great "textile mystery" posed by those columnists. Those amateur sleuths concluded that "Government experts are making a quiet investigation to find out why the industry is not running at full capacity." If any "experts" can find equipment which is not being pushed to the limit, they can undoubtedly get big money for the discovered machines.

**TO COME BACK** to the figures—this time by branches of the industry. Cotton consumption during the first quarter of this year was 23% over the corresponding period of 1940, and 38% over the first quarter of 1939. Wool consumption was approximately 60% over 1940, and 40% over 1939. Silk consumption was 13% over 1940, and 27% *under* 1939. Filament-rayon consumption was 11% over 1940, and 27% over 1939. Rayon-staple consumption is estimated at 5% over 1940, and 42% over 1939!

We have continued our regular chart of textile-mill activity through the first quarter of 1941. Note where the average monthly consumption thus far this year stands.

Then page a couple of columnists!



# A. C. M. A. to Have New Executive

## Paid vice-president for association—W. N. Banks named president at Augusta

**AMERICAN COTTON MANUFACTURERS ASSOCIATION** will have a new paid official, an executive vice-president, under a proposal ratified at the annual convention in Augusta April 25 and 26. This full-time officer will keep in touch with events affecting the members, set up a library of information, and represent the association in conferences with Governmental agencies or authorities. The man has not yet been named. In addition, the association voted to set up a department of public relations, to be headed by Wm. M. McLaurine, who of course will also continue as secretary-treasurer. The convention elected Wm. N. Banks, of Grantville, Ga., president, to succeed Fred W. Symmes, of Greenville, S. C. Herman Cone, of Greensboro, N. C., was elected first vice-president, and Hugh M. Comer, of Sylacauga, Ala., second vice-president. Charles A. Cannon, of Kannapolis, N. C., was in line for the first vice-presidency, but found it necessary to withdraw. Members of the board of government elected were Joe Lanier, Scott Russell, Wm. H. Entwistle, R. C. Moore, and Walter S. Montgomery.

A thoughtful analysis of the problems confronting the members of the association was presented by Mr. Symmes in his annual address.

"Today the primary concern of our industry, as it is of the country at large, is National Defense," he stated. "For immediate strengthening of our efforts to supply vital defense needs the following suggestions are offered. We should:

"Endeavor to produce necessary goods and services, making sure that these goods are of exceptionally high standard and delivered on schedule.

"Preserve our present harmonious relationship between management and men.

"Take complete and effective steps in cooperation with the Government to safeguard our plants against destruction by those who would defeat the purposes of defense.

"Maintain a high state of morale throughout our organization.

"Convince men in all levels that this may be the last stand for democracy, that the Golden Rule is to be applied to the fullest, that laws are to be complied with, and Government regulations observed.

"Get over to the supervisors and foremen that free enterprise in America is on trial, and that unless it shows itself able to respond effectively to the call of defense, it will not be able longer to hold its position in the economy of democracy."

"The day of rugged individualistic capitalistic enterprise as we have known it has passed or is passing," stated Mr. McLaurine in his report as secretary. "The indications are for the old rugged individualism in business to count for less and less, and the control of Government to count for more and more.

"Shall I prove my statement? Who says, in industry, what wages and hours will be, what people can work and who cannot, what freight rates can be changed, how exchanges shall be controlled, what taxes shall be paid, how books can be kept?

"If England and America should lose, the story of regimentation and control would be complete. If England should win, the nations of the world will be so depleted that nothing but Government control will be sufficient for at least a generation.

"The textile industry must prepare for the new American revolution that is at hand, and the men in the industry must change their thinking and make plans for a safe ideology which can quiet the social and economic upheaval."

**WILLIAM NATHANIEL BANKS, new president of American Cotton Manufacturers Association, began his business career as bookkeeper for Grantville (Ga.) Mills in 1904, becoming secretary in 1907 and president in 1909. He was made chairman of board of Habersham (Ga.) Mills in 1921, president of McIntosh Mills, Newnan, Ga., in 1930, and president of Moreland (Ga.) Knitting Mills, in 1930.**

**Mr. Banks was president of Cotton Manufacturers Association of Georgia in 1936-37. He is a director of Arnco Mills, Newnan, director and member of executive board of the Cotton-Textile Institute, trustee of LaGrange College, member Methodist Church, Rotary Club and Alpha Tau Omega fraternity.**

**A. C. M. A.'s new president was born in Grantville, Dec. 9, 1884, son of Nathaniel Overton Banks and Theopa Bobo Banks. He attended Grantville High School and was graduated from Emory College in 1903. He married Miss Evelyn Wright, daughter of the late Congressman W. C. Wright, of Newnan. They have one son, William N. Banks Jr., age 17.**

**THE RETURN** of a familiar figure to the convention platform was that of George

Herman Cone, elected vice-president, A.C.M.A.

A. Sloan, former president of the Cotton-Textile Institute.

"The No. 1 problem of the American people today," he said, "is national defense, which since the turn of the year —and despite the serious strikes which have meant delay to vital parts of our production front, has been shifted from low into second gear. But for these production black-outs in many large plants since the turn of the year, I believe that this defense job would now be shifting into high gear.

'No. 2 problem facing us is that of price inflation. If we are to preserve our economic balance during this emergency there must be no inflationary spiral of prices, either through excessive profits or excessive wage rates.

"Our ability to maintain reasonable price levels and to escape sky-rocketing prices will necessarily depend on cost of production, of which the wage rate, in practically every manufacturing industry, is the chief element. Up to the present labor has materially benefited from the defense program due to more regular employment and in some cases justifiable increases in rates.

"The most critically needed comment that could be made at this crucial moment by some outstanding person whose word would carry a meaning into the hearts of every man and woman in America would be; 'We will all have to work harder, we will all have to work longer, we will all have to work closer together, and we will all have to live off of less before this thing is over'."

"**IF WE DO NOT WIN** this war your factory will be of no use to you anyway!" asserted Major General Edmond B. Gregory, Quartermaster General, speaking at Augusta. He pulled no punches in telling the manufacturers what part they must play in national defense.

"Production will not decrease in the near future from the standpoint of Government orders, and if events in Europe become more serious, the army may be increased by another million men.

"Do not let petty annoyances keep you from doing business with the Government which today is your best customer; defense orders approximate 35% of unfilled orders in wool manufacture and 25% in cotton. You say the customer is always right. Therefore, remember that the War Department is a good customer; it has perfect credit, and your selling expenses are low. Please accept its leadership in what soldiers should wear. Devote your time to production instead of trying to improve on Government requirements.

"The War Department believes in the principles of competition between manufacturing organizations and hopes to continue purchasing on this basis as long as possible. However, there is a plan for war buying which may have to be put into effect if the present voluntary methods of production are not satisfactory, or if war is declared. This would consist of negotiating with individual companies and allocating orders dependent upon individual capacities. Let no one yield to the temptation to let other manufacturers handle Government orders simply because requirements are too stiff."

"The general range of textile prices compares favorably with past years in stability," stated Dr. Claudius T. Murchison, president of the Cotton Textile Institute, "despite the impact of pressing bullish forces, yet the sharp increase in a few instances has caused a feeling of concern for the industry as a whole considering the inflationary forces at work.

"For the next few weeks and months we must anticipate a close and serious consideration of the industry's price problems by Government agencies. . . .

"The statistical picture of the industry is good, with inventories low and unfilled orders two to four months ahead.

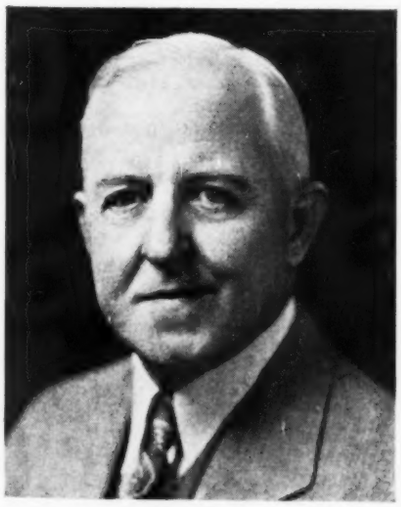
"The cost of manufacturing is irresistibly on the way up, and there are several bills pending in Washington which may further increase costs.

"It would be well for the industry to set up machinery to find out more about the movement of goods after they leave the primary purchaser, as the Institute has advocated for several years.

"After the war, it is probable that domestic cotton consumption will drop to half its present rate. In anticipation of this shrinkage it is wise for the entire industry, including growers, shippers, manufacturers, etc., to organize into one group for the promotion of cotton consumption."

General Gregory (left) and George A. Sloan, who spoke before A.C.M.A.

Fred W. Symmes, retiring president, A.C.M.A.



William M. McLaurine, re-elected secretary, A.C.M.A.

# Mill Men at Mobile

## Alabama cotton manufacturers consider preparedness for war and for peace

**ENTERTAINMENT** in true southern style and the traditional hospitality of the Gulf States awaited the members and guests of the Alabama Cotton Manufacturers Association as they gathered for their 1941 annual meeting at Admiral Semmes Hotel, Mobile, Ala., April 17 and 18.

Approximately 150 registered for the meeting. Many of the guests participated in the golf tournament, the harbor trip, and visits to the beautiful Bellingrath Gardens.

Joe Lanier, president of the association, voiced the keynote of the convention in his opening address when he urged the mill men to accept their responsibilities as citizens more seriously than ever before and to take practical means to attain high ideals of democracy. Speaking of "Preparation for Defense", the theme of the convention, Mr. Lanier said: "Our products cover one of the first needs of the Defense Program that the men inducted into service may be clothed and sheltered, and that demand is being successfully met. . . . Management and labor are both to be commended for their 'all-out' effort." The speaker called attention to the hearings before the Interstate Commerce Commission on the "proportional rate case", which is of tremendous importance to the textile industry of this section, and he commended the work of the Georgia-Alabama Textile Traffic Association in collaboration with Mr. Cunningham's department and the railroads in preparing testimony to be presented in opposition to the cancellation of these rates.

Mr. Lanier urged preparation for the dislocation, deflation and depression that inevitably follows war. "We have never prepared for peace" he said, "no doubt that is the reason the world can't keep it."

W. M. McLaurine, secretary, American Cotton Manufacturers Association, warned the assembly that it should give due consideration to its public relations programs. "We have the minds, the men, the machines, and the materials to make the Defense Program effective" he said, "but these human factors as producing agents must be kept properly related. . . . Management must avoid a narrow habit of thought involving only its own advantage," he concluded.

The vexing and serious question of sabotage was discussed briefly by E. P. Guinane, special agent in charge of F.B.I. at Birmingham, Ala., who urged the members to send in any information they might receive regarding suspicious characters or subversive activities.

At the Friday morning session, presided over by R. P. Clark, Joe Starnes, member of Congress from Alabama's Fifth District, was introduced by Francis Lynch and responded with a rousing call for the curbing of communistic activities in labor circles. As vice-chairman of the Dies Committee, Mr. Starnes spoke with a wealth of background information and a thorough comprehension of the dangers of subversive activities in industry. "If labor, the C.I.O. particularly, will cleanse its house of communists, if it will purge its communistic leaders, we won't have any more of these unwarranted strikes tieing up our defense production," he said.

**FURTHER LEGISLATION** is needed to handle the present situation, Mr. Starnes said, and it should be along the following lines: an outlawing of jurisdictional strikes, the prohibiting of the right of organized labor to take gun squads across State lines, the requiring of labor organizations to incorporate and account to their members and the public for money collected and spent, and the enactment of laws to require a "cooling-off" period before a strike should be called.

Ben Russell presided over the luncheon at which time Dr. C. T. Murchison, president, Cotton-Textile Institute, gave a brief report of recent occurrences in Washington of interest to the textile manufacturer. He mentioned the coming public hearing before the Wage-Hour Administrator and predicted that the new wage limit of 35¢ an hour would be in effect by July 1.

At the banquet, Hugh Comer enhanced his reputation as toast-master. Governor Frank M. Dixon of Alabama was the guest-speaker and the gaiety of the diners was stilled during his serious and thought-provoking address. Decentralization of industry is essential to National Defense, he said, and the leaders of this section should see to it that the present industries, the raw material, the brains—the entire resources of this section are offered to the Government in this present crisis. Decentralization is also essential to the future prosperity of the nation, "You can't wall off poverty, nor ignorance, nor disease," he said. The *entire* nation must prosper, not *one* section. Governor Dixon urged the mill men to offer their machine shop facilities to O.P.M. without delay.

Joe L. Lanier (left), retiring president, elected chairman of the board of Alabama association; J. Craig Smith (center), newly elected president; Ben C. Russell (right), elected vice-president.

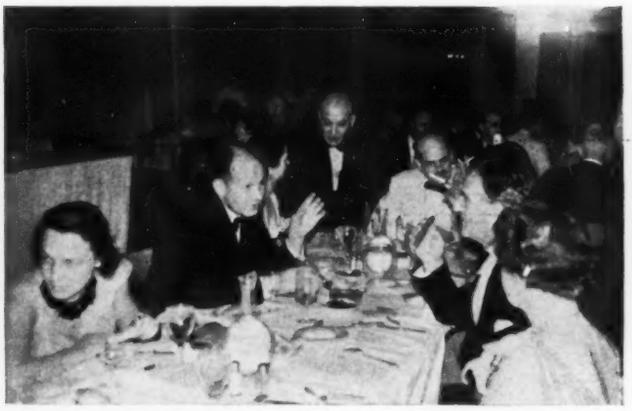
Homer Carter, who was in charge of the golf tournament, introduced lovely Dorothy Kirby, Atlanta's pride, and noted tournament player, who was the one lady-entrant in the association play. Miss Kirby awarded the trophies to the fortunate contenders. First prize for low net went to George Elliott, Huntsville, Ala.; for low gross to Joe Jennings, Fairfax, Ala.

Officers elected to serve for the coming year were: Chairman of the board, Joe L. Lanier, West Point Mfg. Co., Lanett; president, Benj. C. Russell, Russell Mfg. Co., Alexander City; vice-president, J. Craig Smith, Avondale Mills, Sylacauga; treasurer, D. H. Morris, Jr., Geneva Cotton Mills, Geneva; and to the board of directors, Thomas Cousins, Dwight Mfg. Co., Alabama City; George P. Haslam, Standard-Coosa-Thatcher Co., Piedmont; R. C. Forrest, California Cotton Mills, Uniontown; Homer Carter, Pepperell Mfg. Co., Opelika; R. A. Wells, Bemis Bros. Bag Co., Talladega. Dwight Wilhelm was reelected executive secretary.

# What They Do at Conventions

## AT AUGUSTA

A gay party in progress in the room of Clif Watson of Emmons Loom Harness Co., who was present at the convention with his charming wife



Dining room at Bon Air-Vanderbilt Hotel, Augusta, in a lull between courses at A.C.M.A. banquet

J. D. Sandridge, of DuPont, chairman of the golf tournament, and Mickie Gallagher, club professional, confer over handicaps

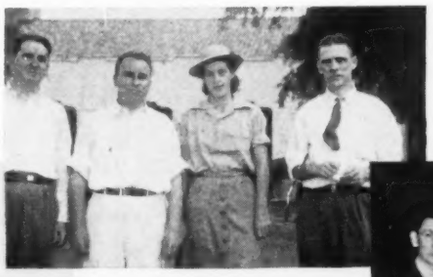
Mrs. Fred W. Morrison, of Washington, and Samuel I. Parker, general sales manager, Ciba Co., New York (Above)

Among the golfers were Jay Iselin, of Woodside Cotton Mills Co., Floyd Jefferson, Jr., of New York, and Reed Anthony, of American Viscose Co. (Upper right)

"Doc" Berlinghof, of American Monorail Co., Charlotte, N. C., Mrs. Berlinghof, and Snelson Chesney, vice-president of John P. Maguire & Co., Inc., New York (At right)

## AT MOBILE

View as two boats left on a 4-hour harbor trip. Many of the guests at Alabama convention took this trip



M. L. Kirby, Joe Jennings and Homer Carter played with Dorothy Kirby, noted golfer of Atlanta. Miss Kirby presented the prizes to lucky contestants at the banquet. Homer Carter had charge of the tournament

*Below:* Caught in hotel lobby: (l. to r.) John Graves, Mrs. Comer, Carl Shannon, Mrs. Graves, Pat Desmond, Miles Comer

# Expect Wage Orders for July 1

## Textile and hosiery new minima may be effective then—To revise record rules

McGRAW-HILL WASHINGTON BUREAU

PAUL WOOTON, Chief Correspondent
Blaine Stubblefield
Irvin D. Foos Carter Field
Robert Colborn M. G. Maury

By BLAINE STUBBLEFIELD


**TEXTILE INDUSTRY COMMITTEE NO. 25** met in Washington on April 14 and 15 and unanimously recommended to Gen. Philip B. Fleming, Wage-Hour Administrator, a 5¢ increase in the minimum wage from 32½¢ to 37½¢. The Committee is headed by Lessing J. Rosenwald, former chairman of Sears Roebuck & Co. This recommendation is assigned for public hearing before the Administrator on May 15. Any interested persons may be heard if they will submit written requests, with full identification, in advance.

For seamless hosiery, nine-man Industry Committee No. 21, headed by G. Allen Dash, Jr., of Wharton School, met on April 7 and 8 and unanimously recommended to the Administrator a 3½¢ increase from 32½¢ to 36¢. Hearing on this was held May 1. There was no opposition. Earl Constantine asked that effective date be Sept. 15.

It was thought probable in Washington that Gen. Fleming would approve both recommendations with the least possible delay, after consideration of the evidence presented at the hearings. No official predictions were made as to effective date of the anticipated orders, but TEXTILE WORLD is privately told by informed persons that it will be about the turn of the fiscal year, or around July 1.

Some observers noted that Gen. Fleming is known to favor rapid increase, according to law, of minimum wages now under 40¢ and that he could, if he wished, call for new committees with a view to getting a maximum recommendation. However, this was considered unlikely. Much more probable is reconsideration by another committee next year, if defense activity keeps up. One more jump of 2½¢ on textiles would put the minimum at the 40¢ maximum.

The definition of the Textile Industry remains the same as it was under the 32½¢ order which went into effect July 15, 1940: yarn and thread; batting, wadding, filling; bleaching, dyeing, finishing of pile fabrics; processing of any textile fabric into various articles; cordage, etc.; manufacturing or processing of yarn or thread from not more than 45% of wool; manufacturing, bleaching, dyeing, printing of fabrics containing not more than 25% wool.

The definition of hosiery under the present recommendation is the same as previously, except that the original minimum of 32½¢ for seamless and 40¢ for full-fashioned hosiery came under one order, whereas now, if a new order is issued on seamless, the two will be operating under separate orders.

Labor and management on the Textile Committee argued their cases with seeming awareness of more important issues in the background. Solomon Barkin, director of research for Textile Workers Union of America, made the principal statement for labor, and Dr. Claudius T. Murchison spoke for the Cotton-Textile Institute and several other textile organizations.

Dr. Murchison said that though the industry is operating at a cotton-consumption rate of 10,000,000 bales annually, it is fair to assume that this period of maximum activity will be spent "before the appearance of general collapse." He urged the committee not to propose a 40¢ wage on the ground it would touch off an inflation spiral which would result in throwing the national economy out of gear. Some branches of the industry, he stated, felt that the minimum rate should not exceed 35¢. Pending effective date of a high wage order, speculative buying would be heavy and its consequences bad, he said.

Mr. Barkin argued that now is the most opportune time to set the minimum wage clear up to 40¢, while the industry is in a position to feel it least. He questioned the suggestion that such an increase in this one industry could put any additional steam behind whatever trend there is toward inflation, what with billions flowing in all channels.

The Government estimates that 650,000 workers are covered by the Textile wage recommendation; that about 289,200 of them will receive increases if the suggested 37½¢ wage is ordered; including 207,000 cotton workers; 28,700 textile products workers; and 47,000 in silk and rayon.

Meanwhile, General Fleming announced that his objective is to put enough inspectors on the job, eventually, to call regularly on all of the 250,000 establishments (in all industries) subject to the law.

A proposed revision and re-codification of record-keeping regulations issued under the Labor Standards Act was the subject of a hearing on May 12 at the Labor Department Building.

COMMITTEE CHAIRMEN: (left) Lessing Rosenwald of the "textile industry" committee; (right) G. A. Dash, Jr., of seamless hosiery group

View in Commercial Museum, Philadelphia, during recent Knitting Arts Exhibition

# Knitting Show at Philadelphia

## Marked by defense program influences and curtailment of machinery exhibits

**THE DECISION** made by several machinery manufacturers not to take space at the 37th Annual Knitting Arts Exhibition, held April 21 to 24, in Philadelphia, resulted in a show decidedly different in character from those of previous years. Contributing further to the changed aspect was the fact that a number of companies, which formerly have had extensive displays of equipment, devoted their booths mainly, if not entirely, to reception purposes. For these reasons, while the exhibition was not devoid of textile machinery, and some new or improved types developed since last year's show were in evidence, the percentage of exhibits given over to knitting yarns and knitting mill supplies was much higher than usual. Although attendance at the exhibition was smaller than had been anticipated, this was compensated by the fact that a large proportion of the visitors was made up of top executives of knitting mills.

The effect of the National Defense Program, which was evident at the Southern Textile Exposition, held earlier in the month, at Greenville, S. C., was even more pronounced at Philadelphia. For example, most of the machinery builders present reported that they are unable to make prompt deliveries—some because they are working on defense orders, and others because of the lack of stainless steel, Monel metal, aluminum, and other metals. Likewise, yarn manufacturers—particularly producers of worsted yarns and combed cotton yarns—stated that they are already far behind in their deliveries.

The growing importance of newer types of yarn, such as Nylon and crepe-de-chine hosiery yarns, was reflected in several exhibits which featured knitting mill accessories designed to facilitate the handling of these yarns, and in other exhibits which emphasized chemicals developed for finishing them.

Also noteworthy was the influence of the Wool Labeling Act and of recently promulgated Federal Trade Commission Rules, which was evident in a number of the displays of labels, packages, and labeling and marking machines.

Absence from the list of exhibitors of most of the manufacturers of circular knitting machines, reflecting their insistence that the exhibition be held biennially, rather than annually, resulted in a marked reduction in the amount of new equipment on display. In fact, only one entirely new knitting machine of any type was shown—a multiple-feed, latch-needle machine. Other machines introduced for the first time included a Nylon sizing machine; a finishing machine for brushing, napping, pile raising, and sueding; a calender and folder for knit goods; an improved hosiery inspecting machine; a high-speed section beamer; improved sewing machines and loopers; a package-tying machine; and label-printing machines. In addition, several new types of equipment introduced at Greenville were also featured at the Philadelphia show. Among these were two automatic filling winders, a second Nylon sizing machine, a high-speed beam warper, a high-speed automatic cone winder, an accelerated fading unit, several improved fluorescent lighting systems, a N.E.M.A. standard a.c. motor, an electrostatic air cleaning device, and an a.c. variable-speed drive.

Detailed descriptions of several machines mentioned are in Textile Equipment News starting on page 95. Convention reports on pages 72 and 73.

# Sees Nylon Hosiery Gains in 1941

**NYLON SHIPMENTS** in 1941 will amount to 17% to 20% of the total women's full-fashioned shipments, according to the report of Earl Constantine, president of National Association of Hosiery Manufacturers before its annual meeting in Philadelphia, April 23. Of the total shipments of women's full-fashioned hosiery during 1940, 6.4% were Nylons, and this represented 2,750,480 doz. prs.

"Public interest and expectancy," said Mr. Constantine, "had been developed long before the Nylon product was available, so that a large curiosity demand had been built up. Only a fraction of this demand has been supplied so far. Until women generally have been able to test out the product in use, we will not definitely know what share in the market will go to it. Most hosiery manufacturers established at the outset a policy of allocation to their customers of the limited amount of Nylon stockings they produced. This usually took the form of a percentage of sales in dozens or in value. Mills not equipped with 45 or higher gauge equipment met serious problems and suffered losses in their efforts to maintain sales, without the ability to supply a quota of Nylon. Nylon is probably a precursor of other synthetic yarns.

"Between June, 1940, and now our industry has contracted with the Government for the production and delivery of over 40,000,000 prs. of wool socks and 25,000,000 prs. of cotton socks. We have been consulted by the procurement officers as to the delivery schedules, with the result that these schedules have not conflicted so far with civilian demands, and invitations have been oversubscribed. So far, the resources of the industry have been called upon only in part.

"Many of the provisions of the Wool Products Labeling Act indicate inadequate consultation with the industries to be affected and a lack of understanding of the established, and frequently necessary, practices in the markets. Not the least burden which the law will impose is the cost of compliance. One of the impractical and unfortunate requirements is that the name of the manufacturer must be stamped on the product. Inasmuch as this requirement is explained as a means to identify the producer, it would seem that this could be accomplished just as effectively by permitting the registration of names and the use thereafter of a registered number. This is particularly true of products which are small in size and do not permit of much marking without disfiguring the product or injuring it commercially."

Irving K. Hessberg, elected chairman of board, N.A.H.M.

In answering the question "what lies ahead?" Mr. Constantine said, "Some of the commodities and other supplies which we use are likely to become scarce, and perhaps in some instances unavailable. In the former case, higher prices and priorities may be expected, while in the latter case the problem of substitution would present itself. Knitting and other equipment used by the industry is not available, even at this time, in large quantities. It is conceivable that new equipment will be harder and harder to get, and that second-hand equipment will take on new values.

"Most of the labor employed by our industry is skilled labor. As the defense program becomes intensified, it is conceivable that many of our workers will be drawn into plants making special defense articles. It is safe to assume that the Government purchases of our products will grow to larger proportions and that some companies which have not bid so far may be called upon to do so.

"Few industrialists fail to realize the growing extent to which their problems are of a character which reach beyond their own operations and which require their full cooperation with others, in order to reduce them or solve them. Everything immediately ahead of us warns us as an industry to work together as we never have before."

**THE RESEARCH COMMITTEE** through C. J. Huber, of U. S. Testing Co., reported progress in developing test methods to apply to finished hosiery in reference to consumers' wear. Mechanical tests of four types of 3-thread 45-gauge silk hosiery have been made, including pendulum-type stretch tester, inclined-plane stretch tester, and Frazier tester; abrasion and snag resistance tests are now being made. Concurrently practical wear tests were carried out on the four types of hosiery by 40 women and the results tabulated. The important final step in correlating the results of the mechanical and practical wear tests is now in progress.

The Research Committee asked that members of the association submit for study problems of a fundamental type applicable to the whole industry. The committee has concerned itself since 1935 with raw silk, carrying out three intercomparison studies with the Yokohama Silk Conditioning House touching particularly on evenness and cleanness. No further intercomparisons are contemplated. During the work the committee developed an excellent method for determining evenness and cleanness of knit goods.

Election of officers of National Assn. of Hosiery Manufacturers resulted in selection of Irving K. Hessberg (Van Raalte Co.) as chairman of the board; P. W. Eshelman (Wilkes Hosiery Mills Co.), and J. J. Kronenberg (Wayne Knitting Mills) as vice-chairmen. Earl Constantine was reelected president, Reuben C. Ball, secretary, and Nathaniel Judson (Mock Judson Voehringer Co.) treasurer. Herbert Jaques (Hub Hosiery Mills) and James N. Weeks (Hanes Hosiery Mills Co.) were elected new directors.

Earl Constantine, president, National Assn. of Hosiery Mfrs.

# Army Parades for Underwear Men

**AT THE ANNUAL MEETING** of the Underwear Institute in Philadelphia, April 24, Army officers spoke on all phases of the industry's relation with the government. Brigadier General William A. McCain, U.S.A., in command of the Philadelphia Quartermaster Depot, addressed the luncheon. "The depot has never dealt with a more cooperative organization than this institute," he said, and added, "You have heard three of my able assistants, and if any bouquets are thrown, they will be theirs and quite right. If any bricks, they will be mine, right or wrong."

The first of these three assistants was Lieut. Colonel Thos. W. Jones, contracting officer of the depot, who explained that as a Government agent he did not enjoy those wide discretionary powers which are associated with

Roy Cheney, president, Underwear Institute

business representatives of corporations.

"Once a contract has been made," he said, "it cannot be altered in any way except under its own provisions. It therefore becomes one of the most inflexible documents known to law. It behooves every bidder to read carefully the Invitation to Bid before he signs it and offers it to the Government." He hinted that the industry might be called on to carry a load two to four times greater than in the last year.

Lieut. Colonel Vere Painter spoke on the inspection side of QMC work. "In the procurement of supplies for the Army," he said, "the objective of inspection is two-fold: (1) To insure that the article or material procured conforms in all respects to the specification

Ralph M. Jones, re-elected chairman, Underwear Institute

under which the purchase was made, thereby protecting the Government's interest; (2) To protect the interest of all contractors and unsuccessful bidders."

Major H. S. Harpole spoke on behalf of the Research and Development Branch, telling of the preparation of specifications for articles wanted for the Army. "Before we recommend the adoption of a material or an article of clothing," he said, "many factors must be considered. Increasingly great stress is being given to design of clothing in order to obtain the maximum of comfort and freedom of movement, without sacrificing neatness of appearance."

Lieut. Colonel G. A. Horkan, executive officer of the Quartermaster School at Schuylkill Arsenal, also spoke. He told of the Industrial Mobilization Plan which had been turned over to the Knudsen Board. He pointed to the slow production of supplies for the last war, and pointed out that the plan was the medium of transition from a peacetime to a war economy.

**ROY CHENEY,** in his annual report, said, "We are unquestionably and definitely committed to war. Business is not and will not be as usual. That time has gone by. The main job of our industry is to supply the Government fully with its needs. But, another job almost as great was our need to avoid training people for future unemployment and to avoid building for future over-capacity. In short, to plan *now* to cushion the effects of the after-the-war let-down.

"We are faced with an increase in wages due to the operation of the Fair Labor Standards Act. What the increase will be, no one now knows.

"In relation to Government work, we made representations to the Office of Production Management, and, by the prompt action of Donald Nelson, secured the ruling that no wage scale imposed by the Wage and Hour Division shall become effective without consultation with the OPM.

"The Wool Products Labeling Act of 1939 is the product of those saintly people, the wool growers. Ostensibly passed for the benefit of the consumer, its real purpose is to line the pockets of the wool growers at the expense of the people of the United States. Its disrupting effect in its effort to change the buying habits of the public is an unpatriotic effort in this time of stress. The evils it is supposed to cure, did not exist. I may say also that it will be unnecessary to mark or label merchandise bought by the Government.

"I will mention the danger of sabotage. I think it is advisable for every mill having a Government contract to contact the Federal Bureau of Investigation for advice and counsel as to the best ways of protecting its plant.

The Underwear Institute reelected its principal officers as follows: Chairman of executive committee, Ralph M. Jones, Utica Knitting Co.; first vice-chairman, Grover C. Good, Globe Knitting Works; second vice-chairman, Walter W. Moyer, Moyer Underwear Mill; treasurer, Oscar W. Gridley, Utica Knitting Co.

The institute adopted an "up-and-down clause" to be part of sales contracts to cover prices and/or deliveries in event of changes by Government order during the life of the contract.

The 85% wool underwear (15 lb. shirt and 14 lb. drawer) came in for discussion, as machinery appears inadequate to supply the quantities desired. Major Harpole suggested that some mills may have 10 or 12 cut machines in their sweater departments which would be usable. Arthur M. Reis filed a report on suggested revision of QMC's tentative specifications for these garments. The meeting also heard a report on the conference with combed yarn spinners on the rise in prices of combed yarns.

Meeting went on record unanimously as supporting the Thomas resolution now in the Senate which would postpone effective date of Wool Labeling Act till 30 days after signing of peace between England and Germany.

# Biggest "Cotton Week"

## Over 150,000 retailers make cotton drive from May 16 to 24, helped by sponsors

**OBSERVANCE** of National Cotton Week this year took on a significance unequalled in the history of this promotional event, with the announcement by Dr. C. T. Murchison, president of the Cotton-Textile Institute, that 150,000 retailers would take part. This annual campaign, which opens Friday, May 16, and continues to Saturday, May 24, is under the joint auspices of the Institute and the National Cotton Council.

Many factors have combined to widen the scope of the drive, among them the growing realization of cotton's important place in the national economy. This note was given emphasis in public addresses and statements, preliminary to the campaign. The highlight was a strong endorsement of Cotton Week from President Roosevelt. In a letter to Oscar Johnston, president of the National Cotton Council, President Roosevelt urged everyone to support the event as a patriotic duty. The President's letter stressed the curtailment of cotton markets resulting from the war. He urged that all Americans cooperate to increase the use of the fiber at home, as more than 25,000,000 persons in 18 States are wholly or partially dependent upon cotton for a livelihood.

One of the features of Cotton Week this year is the increased support it is receiving from the larger department stores in the principal cities of the northern States. C. K. Everett, director of merchandising for the Institute, reported at the end of an extended trip that these retailers showed more interest in the event than ever before, and that the major stores planned special merchandising programs for the occasion. The degree of interest shown by the big stores was evident in the substantial attendance at meetings addressed by Mr. Everett. The Chicago meeting brought out 58 retailers, that in Detroit was attended by 30, and proportionate groups gathered in Boston, Washington, and other cities.

**STATISTICS TELL THE STORY.** Figures offer further evidence of the widespread determination to make the nation cotton-conscious. It is estimated that retailers will spend over $3,000,000 in specially planned advertising for Cotton Week. The Cotton-Textile Institute has distributed 5,000,000 copies of the official poster. This poster reflects the nationalistic mood; it shows Columbia holding a basket of cotton, with an American eagle beside her.

The campaign has the support of 6,000 civic and trade associations, as well as all the principal media of communication. Many commercial bodies, not usually active in the event are giving it active backing this year. Behind that support is the principle that increased domestic consumption of cotton can aid national prosperity which in turn would benefit all industry. Last year cotton consumption totalled 8,000,000 bales, and the expected total for 1941 is 9,250,000 bales. The aim of the Institute and the Council is 10,000,000 bales.

The backbone of the drive, of course, is a vigorous advertising and publicity program, in which all the leading newspapers, magazines and radio chains are cooperating. The Institute has distributed large quantities of advertising mats, and publicity material. The retailers have been supplied with complete display plans, promotional ideas and timely suggestions to use in their Cotton Week tie-ups. One interesting feature, which is new this year, is a special Cotton Week newspaper, entitled "Retail Information". This bulletin has been going out regularly to stores from coast-to-coast throughout the weeks of preparation.

Radio, publicity's newest instrument, will bring cotton's message to many millions, in a diversity of programs. These presentations emphasize cotton's important place in American life, both as regards requirements of apparel and the home, and also the growing use of cotton as an industrial material. Various leading companies plan to give time on their programs to the event.

The force of this merchandising effort is expected to push store volume on cotton merchandise to new high records both during and after Cotton Week. Retailers will give cotton-content lines the place of honor in all selling.

Cotton Week lends itself particularly well to a tie up with the American fashions movement, and plans have been made by high-style apparel stores to promote wide lines of cotton fashion merchandise during the event. Leading dress manufacturers have taken advantage of the valuable publicity to expand their showings of cotton models, in all the newest materials. The whole range of smart cottons is being highlighted, including chambrays, ginghams, and other fabrics. Cotton lace, which is particularly important this year, is receiving especial attention in the program. Cotton lace models by American designers have a prominent place in Cotton Week displays in the stores.

"Evening With Cottons" style show put on by the Cotton-Textile Institute at A.C.M.A. convention. The show is a "cotton week" feature

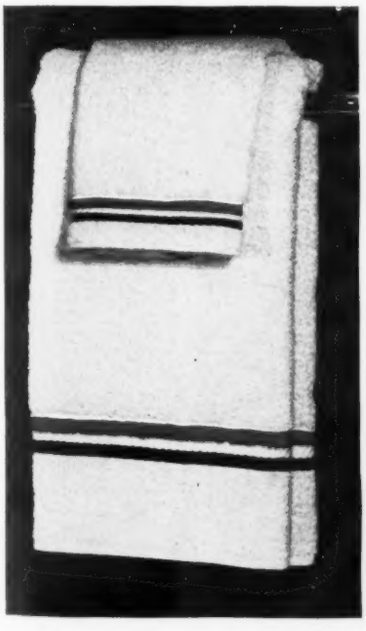
# DEFENSE Injects Patriotic Motif into Textiles

Bonwit Teller
My-Country-
'Tis-of-Thee Emblems
blaze in our
Accessory Lounge, 2nd Floor
• Jackets with blue-fielded stars
• Bags with heraldic rampant lions
• Eagle-crested hankies and gloves
• Tricolor jewels—Officers' stripe belts, berets
• Sweaters emblazoned with R. A. F. wings

MILITARY SYMBOLS and styles, and red-white-and-blue colorings have invaded the field of consumer textiles as a result of the war emergency and the Defense Program. These four pages show the extent and variety of this movement. The front cover illustration belongs to this group. It is a patriotic tablecloth, featuring signatures and dates of all the presidents, designed by Marguerita Mergentime.

RIBBON for dress decoration, millinery, etc., is being printed with military symbols, and featured in red, white and blue, separately or together

SPORT CLOTHS catch the enthusiasm for red, white and blue. Above is a wool-knit slack suit. The brass buttons bear spread eagles. Photo from Bureau of Fashion Trends (above)



TOWELS are offered in severe styles approaching the plain effects used in military service. At left is "Annapolis" line from Cannon Mills

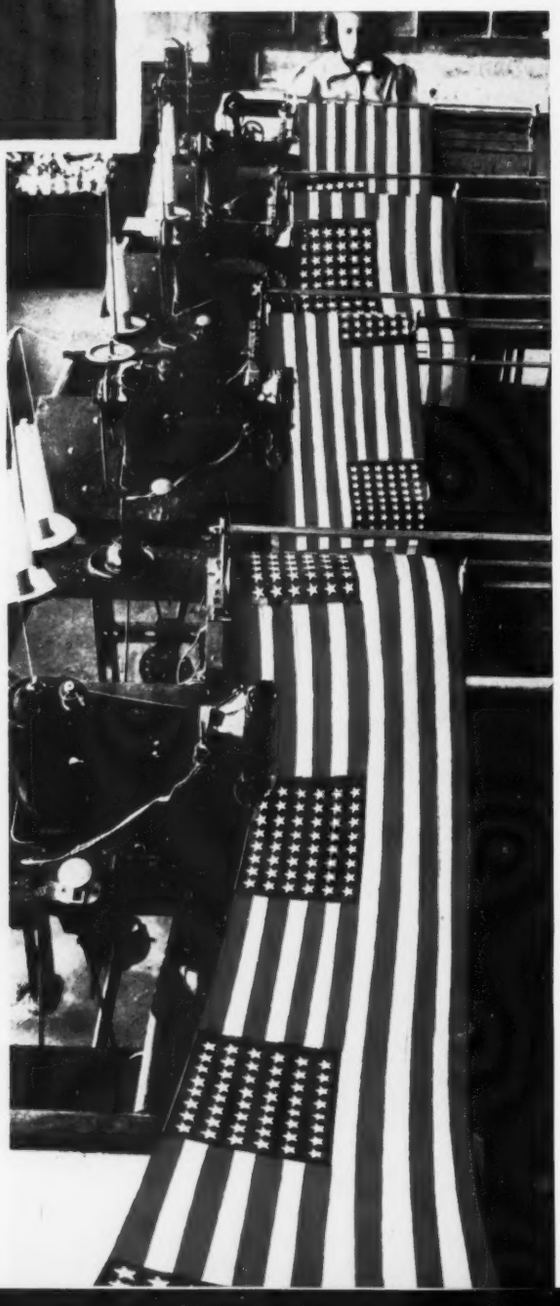
COSMETIC BAGS and similar accessories are being imprinted with eagles, stars, chevrons, etc., to keep them in tune with Defense styles

EMBLEMS are offered as accessories for those inclined to home-sewing. They are made in red, white, blue, gold, black and brown

GLORIFIED SLACK SUIT worn by Lucy Monroe, the "Star Spangled Banner Girl" who has sung the national anthem over 1000 times to audiences all over the country. Photograph courtesy of *Look* Magazine

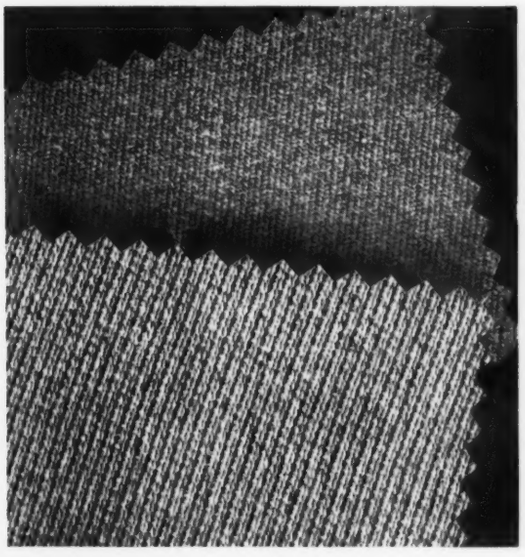
EPAULETS, military buttons, etc., are featured in this dinner dress from "First Fashions of America," designed by Marian Stephenson on inspiration from an old-time military uniform. Photograph courtesy of *Collier's*, the National Weekly

FLAG MANUFACTURE speeds up. Picture shows a battery of hemstitching machines in plant of Annin & Co., New York, which are converting printed flags by the yard into separate items (below)



HOSIERY falls in line with military symbols featured in clocking. The two items illustrated are from Interwoven Stocking Co., and retail at two pairs for $1.00. Each has elastic top

ELASTIQUE, a worsted trousering used by U. S. Army, at top, and below "Cavalry Twill," a staple rayon blend for women's wear, inspired by it. The elastique customarily appears in olive drab (below)



SERVICE SYMBOL PRINTS (registered in U. S. Patent Office by Sorel Silks Corp.) are available in washable rayon crepe retailing at 98¢ a yard, as well as in made-up garments. The line comes in 13 patterns and a variety of colors (below)

KNITTING has been boosted by the war. Kit bag of cotton canvas from "Bundles for Britain" holds yarn and needles, also a bathing suit (below)

BRITISH-AMERICAN AMBULANCE CORPS, INC., has sponsored B.A.A.C. Textiles. Stores selling these materials by the yard or in dresses give 10% of the purchase price to the Ambulance Corps. Window display is from Peck & Peck, New York

## DEFENSE Injects Patriotic Motif into Textiles

FELT BANNERS with patriotic pictures and mottoes have had wide sale in great variety of types

SCARFS were already popular, and military motifs became one of the numerous classes of designs available

HANDKERCHIEFS are printed in patriotic motifs and colors

DRAPERIES now fly the red, white and blue at many windows. The above is from Fincastle's American group made by Louisville Textiles, Inc. (It is shown about half size)

BATHING SUITS also catch the patriotic mode as shown at right from Jantzen's new line

# Fabrics For National Defense

## Digests of Army specifications for airplane cloth and mosquito netting

**ALL-METAL AIRPLANES** are not commonly used by our military forces, if one wants to pick at small details. The "small details" of the planes are the control surfaces, which still are fabric covered, and which, under the present enormous building program, will require thousands of yards of airplane cloth. In addition, many trainer planes are completely fabric covered, which will increase the requirements.

A joint specification (AN-CCC-C-399) approved by the War and Navy Departments gives the following requirements for airplane cloth:

*Grade*—Shall be first quality only.

*Material*—Cotton used shall be of 1½-in. minimum staple length; yarns shall be combed 2-ply, and shall be mercerized under tension.

*Weave*—Shall be plain; selvages shall be flat woven, with no greater tension than the body.

*Finish*—Piece mercerization is not acceptable; finishing shall consist of washing, framing, and medium-cold calendering; calendering should lay the nap and provide a smooth even surface, but excessive roll pressure must be avoided; finished cloth shall be free from wrinkles.

*Sizing*—Cloth shall not contain more than 2½% sizing or other non-fibrous material.

*Neutralization*—Finished cloth shall be chemically neutral.

*Weight*—Shall not be greater than 4.0 oz. per sq. yd., except for 90-in. material which may weigh 4.5 oz. per sq. yd.

*Width*—Shall be as specified in invitation to bid. (Usual range of widths is from 36 to 90 in.) Plus or minus tolerances on width which are permissible are: 36 in., ½ in.; 42 in., ⅝ in.; 60 in., 1 in.; 69 in., 1 in.; 90 in., 1½ in.

*Threads per inch*—84 x 84 maximum, 80 x 80 minimum.

*Strength*—(by strip method) 80 lb. warp and 80 lb. filling, minimum.

*Elongation*—(strip method, 70 lb. tension) 13% warp, 11% filling, maximum.

*Length*—Cuts shall be 40 yd., with allowance that 10% of the contract may be pieces 10–25 yd., and 10% may be pieces 25–40 yd.; no pieces under 10 yd. are acceptable. Widths 36 to 42 in. shall be in 500–600-yd. rolls; 60–69 in. shall be in 250–300-yd. rolls; 90 in. shall be in 175–200-yd. rolls.

[Approximate gray construction (not given in specification) necessary to meet finished requirements: 36 to 90 in., 80 x 80, 60/2 combed warp and filling, 4.0 oz. per sq. yd.]

**IN SPITE OF DRAINAGE** and other precautionary measures, mosquitoes still breed and still plague people, even soldiers. Consequently, mosquito netting will play an important part in the comfort of the soldiers, particularly those encamped in low-lying areas near the coast. Tricot knitted netting was discussed in our April issue. The woven netting which has been specified is covered by Quartermaster Corps Tentative Specification P.Q.D. No. 17, a digest of which follows:

*Grade*—Shall be of only one type, and quality shall be all "firsts."

*Material and Workmanship*—Cotton shall be thoroughly cleaned, well combed, and evenly spun; finished goods shall be free from holes, oil stains, or other imperfections which may affect appearance or serviceability.

*Width*—35 or 48 in. including selvages, as specified.

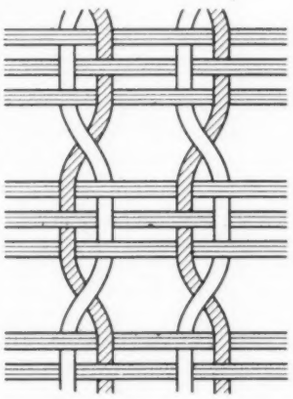
*Weight*—1.5 oz. per sq. yd., minimum.

*Thread Count*—28–30 ends per in., 42–45 picks per in.

*Strength*—(1 x 1 x 3 grab) 30 lb. warp, 15 lb. filling, minimum.

*Meshes per sq. in.*—196–225.

*Weave*—Shall be as that illustrated; picks shall be pushed together into groups of three, forming clear, well-defined openings between groups.



Weave required for Army leno mosquito netting

Fabric covers control surfaces and side panels of the fuselage on this North American PT-9 trainer plane

*Finish*—Well scoured but not bleached; shall be given a permanent finish to retard slippage of warp along filling and shall be sized to a character equal to that of an approved sample. The permanent finish shall not be appreciably removed by three launderings in accordance with Section XIV of Federal Specification CCC-T-191, nor shall any finishing materials be subject to absorption and retention of chlorine from laundry bleach solutions.

*Shrinkage*—Shall not shrink more than 8% in warp or filling when subjected to shrinkage tests outlined in Section XIV, Specification CCC-T-191.

*Length of Piece*—Continuous pieces of not less than 50 yd.

*Defects*—Shall be plainly marked; one yard shall be deducted from gross yardage for each defect, except that not more than two defects shall be deducted in a running yard of fabric.

[Approximate gray construction (not given in specification) necessary to produce a fabric meeting finished specifications: 36 in., 28 x 44, 30's combed warp, 40's combed filling, 10.8 yd. per lb.]

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*For summary of Washington developments on defense matters, see page 132. Other articles related to defense on pages 80 to 82.*

# Cooperation for National Defense

## Bottlenecks to production prevented by team work by mill men and Government

By STEPHEN C. HALE
Chief Engineer, Fulton Bag & Cotton Mills

**"COOPERATION"** is defined in the dictionary as: "working together in pursuit of common well-being." No doubt Mr. Hitler would disagree with our use of the expression "well-being"; but I venture to indicate the American concept of it as being: food, shelter, clothing, health and security, and the inalienable right of life, liberty, and the pursuit of happiness. Had this ideal been universally accepted and practiced through the world, our present problem of national defense would not be occupying such a large and disproportionate amount of our time, thought, energy, and expenditures today. As it is, we are all greatly interested in the defense program, and the textile industry is doing its part in the successful execution of this national effort.

The primary contributions of the textile industry to the national defense program are clothing and shelter for the members of our armed forces and those in associated activities, and other textile products utilized to various degrees in major and auxiliary equipment. While the quantities of textiles involved in the Government's requirements are staggering in themselves, Government purchases have not exerted an undue drain upon the facilities of the industry. There have been scattered instances of slow delivery of certain specialized products called for by the defense program; but, broadly speaking, there are and have been no bottlenecks in the textile industry.

As indicative of the state of preparedness, the patriotism, and the high standards under which textile management has taken in its stride the job of providing textiles for national defense, I should like to quote from a recent statement by John A. Simmons, general manager of the Lanett Bleachery & Dye Works, West Point, Ga. Mr. Simmons said in part:

"A tremendous load was thrown on the entire textile industry, particularly on the plants in the South, because they specialize in the heavier-weight goods for clothing, tents, gun covers, gasmask covering, and numerous other items for which heavy twills and ducks are required. Well over 75% of the entire requirements for these goods has to come out of the South.

"When we started, it was evident that it would be necessary to make some expansion to take care of certain items on which the production in this country was not very large, and we knew there were comparatively few manufacturers able to do it. This was on mineral dyeing for tent purposes, and five months after the request was made and contracts were taken, production was expanded 400%. The Defense Commission, as well as the various quartermasters, have been advised that we stood ready to do whatever was necessary to expand further if they could not get their requirements taken care of adequately and on time.

"Other types of work have been expanded a great deal, none less than 100%, and all this expansion has been entirely on defense work and is being held for that purpose so long as the defense program has the need of it.

"Personnel has been expanded about 30%. Of necessity, boiler capacity had to be increased, the expansion being taken care of by installing water wells on some of our older Stirling boilers not so equipped, permitting us to operate at higher rating, as well as to secure increased capacity.

"From what we have been able to find out, no southern cotton manufacturer has hesitated to spend money where necessary to get ready for the program and to cooperate with the Defense Commission in any way that would be helpful.

"We have advised the quartermasters that our plant is at their disposal for any work that they want done, and that, while we want to keep our old customers as far as possible, if the program demands it, we are willing to go entirely on this work. So far this has not been necessary, as there has been ample capacity, with the expansion that has taken place, to take care of the requirements in practically every line up to the present time. We believe this is true of the textile industry as a whole, as there is ample capacity and the mills are ready to go ahead with anything that may be required for the protection of our country."

Mr. Simmons' statement and similar expressions from others in the industry give us encouragement and confidence that the textile industry will continue to do its part in national defense. Benjamin Elsas, chairman of the board, Fulton Bag & Cotton Mills, said recently: "Regardless of the necessary cost, I firmly believe that this country should provide all of the materials needed to enable Britain to win the war against the Hitler regime. I favor the necessary preparations for complete defense, come what may."

A short time ago, while I was making the rounds of the plant, a worker said to me, "Who does this guy Hitler think he is anyhow—jumping on those poor people? He has got to be stopped." A few weeks later, "What about this sabotage stuff? A man living in my neighborhood talks and acts pretty suspiciously. Shall I report him to the FBI?"

These instances are given to illustrate the present attitude where Americans—whether owners, managers, or laborers—have made up their minds to see the national defense program through, regardless of any sacrifice.

**SPECIFICATIONS.** There is still room for improvement in some specifications, and undoubtedly representatives of the Defense Commission and of the textile industry will continue their present whole-hearted cooperation to this end. For example, Fulton Bag & Cotton Mills made a lot of sand bags for the Army in the last war. These bags were sewed in conformity with Army specifications. In future production, sand bags can be made with at least equal strength and at lower cost if the company is allowed to place the result of many years of experience into the job of sewing the bags. This would mean modifying Army specifications; but it is felt that this would be well worth-while.

Relevant to the matter of specifications is the following quotation from a recent letter from A. D. Asbury, of J. E. Sirrine & Co.:

Abstract of paper presented at spring meeting of the American Society of Mechanical Engineers, in Atlanta, Ga.

"One of the main difficulties the industry has had to face was to meet the Quartermasters' specifications and at the same time make delivery in a hurry. The mills could meet the specifications if they were given time enough; but it has been rather difficult to meet rigid specifications and at the same time make prompt delivery.

"In one case, the specifications called for 16s yarns 4 ply. When the quotations were received, it was found that one mill had submitted samples and specifications on making cloth of 4s single instead of the 16s 4 ply. Due to the emergency conditions, they were given a fairly good order at an adjusted price and, so far as we know, this change in specifications has worked out completely satisfactorily.

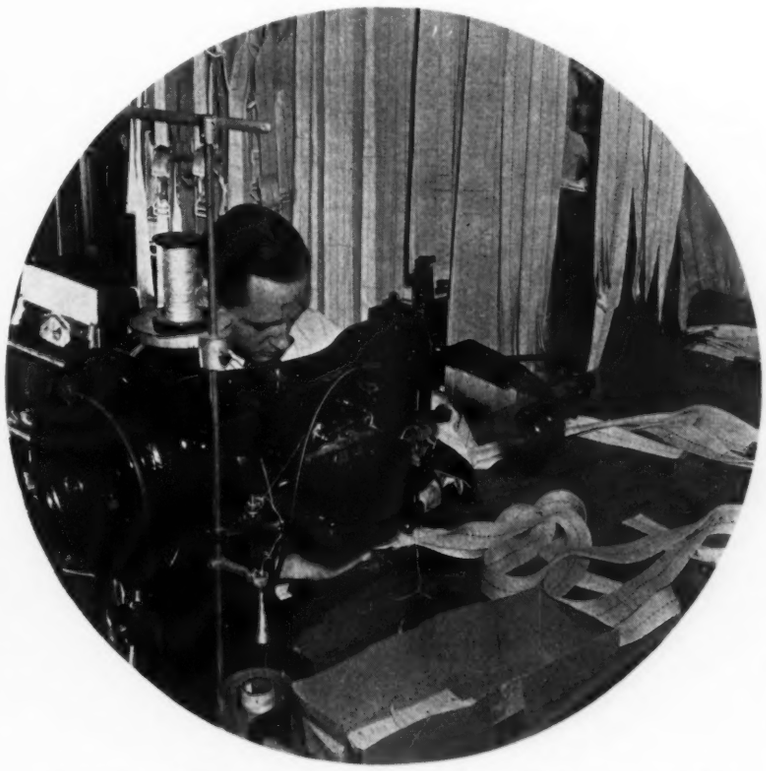
"In another case, the specifications called for combed ply yarn, which, of course, limited the number of plants that could supply this material. When the specifications were opened, they found that only about one-half or three-fourths of the quantities wanted had been quoted on. I understand that the Quartermaster Corps asked for other quotations on a carded basis, instead of a combed basis, and secured all the material needed."

It should be clear to all of us that the textile industry is doing very well indeed in its part of the defense program. How does it happen that this industry is well enough prepared on short notice with the necessary facilities of all kinds, including plants, management, and working forces, to take on and fill defense orders to the extent indicated?

Research and manufacturing ingenuity furnished a part of the answer. Let us take one vital defense item, the parachute, to illustrate this point. There are six parts or assemblies in a complete parachute. The pack is made of cotton and is of domestic origin. The harness is made of linen which comes, normally, from Ireland. The suspension lines, canopy, pilot chute, and threads are made from silk normally imported from Japan.

For a number of years, a great effort has been made by Government procurement officers working with textile men to develop domestic substitutes for this silk and linen. This important development was undertaken to be ready for a possible emergency when importation of these two strategic materials might be cut off. It is now reported that a satisfactory cotton substitute for Irish linen webbing has been developed by Bibb Mfg. Co., this product first coming into being as a superior heat-resistant cord for tire fabric. Nylon, produced by E. I. du Pont de Nemours Co., is a practical substitute for the silk formerly considered essential for parachutes.

**THE PERSONNEL RELATIONSHIPS** in textile establishments represent a problem of major proportions. In any large establishment, supervisors — whether managers, superintendents, foremen, or secondhands—must make direct contact with the workers with sufficient frequency and in such a manner that the worker will feel that he has contact with the "bosses" and that he finds these contacts desirable and stimulating. Some of the most satisfying incidents of my life have come from direct and personal contact with workmen. Following is a simple illustration.



Cooperation between Army officers and textile men has resulted in development of domestic substitutes for linen webbing

It concerns a worker in a silk mill organization. This man's foreman was a highly skilled technician, but he lacked the personality and the human qualities that would have permitted him to appreciate the men under him and their need for an occasional expression of appreciation for work well done. The workman had made suggestions to his foreman for simple improvements for doing certain jobs. These suggestions were invariably resented by this particular foreman, who appeared to think that he himself was very superior in certain matters and that, therefore, all necessary improvements should come from him.

The workman was low down in the scale of wages, but had exceptional ability in his particular work. The plant was in a small town, and the workman and his family were good citizens and did their share of church work and other civic activities. Two of the daughters of this man were teachers in a public school and were a source of great satisfaction and pride to the worker. For some time he had been very unhappy on the job and finally decided that the only way out was to seek employment elsewhere.

Fortunately, an appropriate opportunity for contact with me came up, and a heart-to-heart talk after business hours and in private finally resulted in action whereby this man's work on the same job gave pleasure and satisfaction instead of worry and discouragement. A letter of appreciation, laboriously written in pencil, came to me a short time later and it is one of my most highly prized possessions.

It seems to me that it is up to the management to provide an atmosphere in the work shop where workers feel that they have a recognized human value to the business and are not just cogs in a wheel. They do have problems and need help in getting straightened out.

Many of these problems are much better straightened out by a company supervisor than by some outsider. There are many supervisors who appreciate the importance of getting around and making it easy for workers to talk to them. I see this practice in operation every day, as I go about the mill.

# War Must Be Won From Within

## If strong there, we need fear no dangers from without, says Cramer

**OUR COUNTRY** is determined not to let the same diseases which were fatal to France sap our own strength, said Stuart W. Cramer, president of Cramerton (N. C.) Mills, Inc, and of the Southern Combed Yarn Spinners Association, in an address before the Piedmont Section of the American Association of Textile Chemists and Colorists at Asheville, N. C., on April 19. An abstract of Mr. Cramer's remarks follows:

"What, as private citizens, can we do to help? Oh, there are plenty of ways that we can help, and the help that we the people alone can give is so vital that without it the best efforts of our Government and of its armed forces will be unavailing.

"First, we can forget politics, class distinctions and differences of opinion, joining as a united people in support of the President and the Congress, in whatever policies they may decide upon. Without unity there can be no possible victory. It may be that certain politicians will take advantage of the opportunity to rob us maliciously of some of the rights and freedoms that we greatly cherish, but I would rather take a chance after the struggle of throwing off that yoke than the yoke of a foreign invader. . . . .

"Hardly less important than united support of our Government is the obligation to work our hardest to produce the munitions and supplies needed by our expanding Army and Navy. Wars of today are won more by industrial production than by tactical skill. I will not say that the proper armament outweighs the courage and steadfastness of the individual soldier, because the best equipment would be wasted on an army of cowards. I do say, however, that the bravest soldiers under the most brilliant leadership, can win no battles against an enemy of average personnel whose material is vastly superior. The arsenal of the victor must run at top speed, and it will not do so unless each one of us engaged in the productive effort gives all he has to his job.

"A diminishing number of business men still appear to regard this war (which we are in or out of as you may look at it) as an opportunity to make more money than they ever made before. Can America arm with such an attitude? Hitler says we can't; that the decadent plutocracies are so corrupted by sloth, selfishness, greed and dissension, that they are incapable of any effective war effort. My opinion is that the American system of private enterprise can outstrip Hitler's system of forced and regimented economy if American business will unite in keeping the motive of private profit secondary to that of national defense.

Stuart W. Cramer, president, Cramerton (N. C.) Mills

**"TAKE A LOOK at France. Study her history during the last few critical years, and draw your own lessons from the fate of the country that allows itself to fall into the hands of the political demagog, the business profiteer and the labor racketeer! Shall we allow the same fatal diseases to sap our strength? From sea to sea, from mountain, plain and valley, swells a thunderous NO!"**

"I hold no brief against reasonable profits. Without the taxes arising from substantial and widespread profits the enormous Government purchases of munitions could never be paid for. But can we not be satisfied with profits that we would have considered handsome under normal conditions? Can the economic structure stand an ascending spiral of runaway prices started by heavy Government buying and encouraged by speculation? Even if the war effort should survive such conditions, peace would bring disaster.

"Last but by no means least, we can handle the relations between labor and management in such a way as to maintain the uninterrupted flow of vital munitions through our industrial plants. The loss of every man-hour of production in defense industries may mean the loss of one or more American lives. The loss of any considerable proportion of our total productive capacity will certainly cause our whole armament program to bog down. If we cannot arm, we will be vanquished. If we are vanquished, we will be slaves.

"The vast majority of men in the management of American industry have come from the ranks of labor; there is no laborer, however obscure and insignificant, who has not the opportunity to raise himself by his own efforts to the highest post in American industry. There are no locked doors here that need to be battered down; they stand open to welcome every man whose skill, loyalty and energy can make him more valuable to the success of the enterprise.

In the army of Napoleon it was said that there was a marshal's baton in every knapsack; in the army of American industry there is the key to a private office in every dinner-pail. . . . .

"Cannot these men, all American and all with a common stake in the future of our country, get together on reasonable wages and working conditions without keeping Uncle Sam waiting for the things he needs so badly while they squabble? Does Labor, organized or unorganized, want to use the national peril as a lever to secure organizational or other gains they were unable to obtain in normal times?

"Take a look at France. Study her history during the last few critical years, and draw your own lessons from the fate of the country that allows itself to fall into the hands of the political demagog, the business profiteer and the labor racketeer! Shall we allow the same fatal diseases to sap our strength? From sea to sea, from mountain, plain and valley, swells a thunderous NO! If we cannot heal our sores we will cut them out. If we are strong and healthy within we need fear no dangers from without!"

# 163% Increase in Winding Speed

## And improvement in quality of product follow installation of modern machines

By E. L. EPPERSON
Central Mills, Sylacauga, Ala.

**CENTRAL MILLS,** Sylacauga, Ala., one of the well-known Avondale Mills group, operates 24,192 spindles on hosiery yarns, 20/1 to 40/1, on cones, with a capacity of 54,000 lb. per 80-hr. week. Uniformity of product, as well as high quality, is particularly essential with this type of yarn. Some months ago, as a part of our continuously promoted program of modernization, we started to make a study of what steps if any could be taken to improve the quality and production of work in the winding department.

As a result of this study, eight new Model 102 Foster machines were purchased to replace older type No. 30 winders. The new winders are 100-spindle, 6-in. traverse, for handling knitting cones and also dye packages.

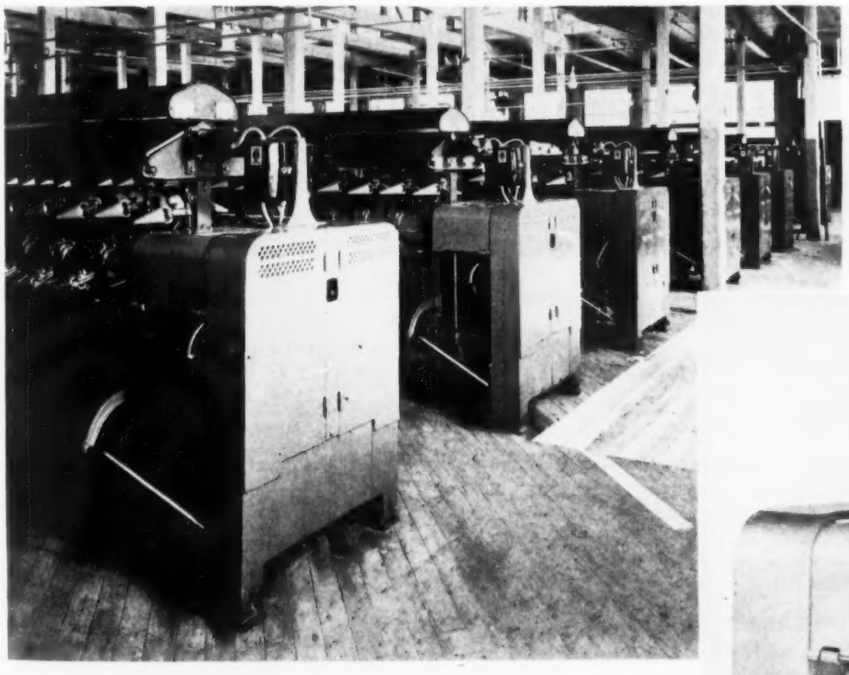
A comparison of production records indicates that on 30/1 yarn the new machines will wind 76.1 lb. per spindle per 80-hr. week, against 27.1 lb. on the older models. Cones now are running more uniformly as regards diameter, taper, and even winding; over-shot and under-shot cones are seldom found. Rewinding has almost disappeared. Just prior to the installation of the new machines it was necessary to rewind a considerable portion of the product in order to conform to higher standards and stricter inspection. The superior accuracy of the new Model 102 machines has reduced this rewinding to a negligible amount. Average winding speeds have been increased from 190 yd. per min. on the old machines to 500 yd. per min. on the newer models.

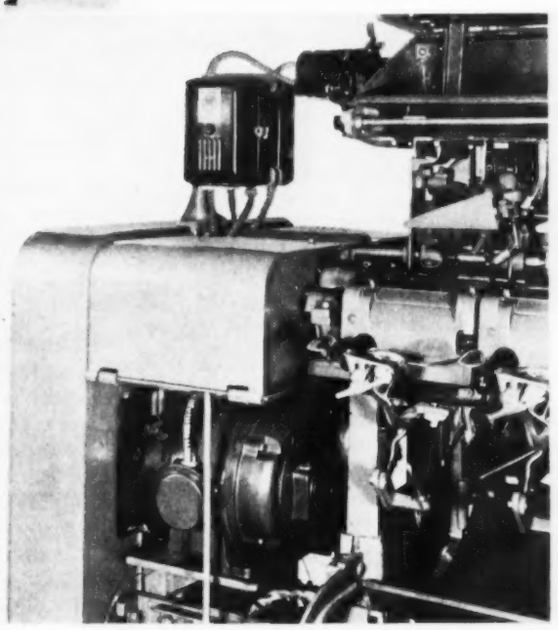
All the new machines have the self-threading feature on tensions and drop wires, as opposed to hand threading on the old machines. This permits quicker piecing-up of ends, and increases production. Another improvement is the tandem blade and McColl slub catcher, which reduces the number of slubs and increases the quality of the product.

Considerable saving in floor-space has resulted from the installations. Old winders were arranged with narrow alleys, barely wide enough for operators to pass one another. The new layout provides alleys sufficiently wide for operators to pass large yarn boxes without crowding. Approximately 35% of the floor space was saved by the change.

Another important saving was realized in power. Each of the new machines is equipped with two Westinghouse 3-hp., 550-volt, 60-cycle motors. Power consumed is only 42% of that required for the previous layout.

The mill executives are highly pleased with the result of the change, not only because of the increase in man-hour production and the savings in power cost and floor space, but also because of the better working conditions and improved yarn quality.





General view of winding room at Central Mills, Sylacauga, Ala., showing Foster Model 102 winders which, on 30/1 yarn, wind more than 75 lb. per spindle per 80-hr. week, and reduce to a negligible quantity the amount of yarn that must be rewound. Insert shows close-up of one of the Westinghouse 3-hp., 550-volt, 60-cycle motors which is controlled from a shipper rod running the length of the frame; each side is driven independently by its own motor

# Cost Manual for Yarn Processing

## Provides uniform cost-finding system for bleachers, mercerizers, and dyers

By FORREST J. FALES
Cost Engineer, Glenlyon Print Works

**THE PURPOSE OF** a cost system is twofold: first, as an aid to efficient plant management; second, as a basis for establishing finishing prices. Once established and put into operation, a good cost system often has been found to be the means of pointing out where savings may be made and, as a result, economies have been brought about which have amounted to many times the expense of maintaining the cost system.

Realizing the advantages of the use of a uniform cost system throughout the trade, several branches of the textile industry, through their trade associations, have established such standard methods. As yet, however, no uniform methods have been adopted for determining costs for bleaching, mercerizing, dyeing, and winding of yarn. This manual has been compiled, therefore, with the view that it may lead to the establishment of uniform methods in plants performing those operations. With very little variation in method, the principles and methods enumerated may be applied to finding the costs of bleaching, mercerizing, dyeing, printing, and finishing of piece goods. In addition, by analysis of the several expense items, the requirements of cost accounting for Government contracts may be attained.

The manual has been planned to cover extreme conditions in cost-method requirements for the industry as a whole. Individual companies will, of course, make use of only those parts which meet their own particular conditions. For simplicity and helpfulness, the manual is so laid out that the sections represent what has been found to be the most convenient sequence of steps in the actual installation of the methods advocated.

**I. Departmentalization.** As a means of localizing and measuring expense, it is advisable to divide the plant into departments. These can follow the different general functions or can be made on the basis of supervisory control. As a means of identification, the established departments should be given symbols, for accounting purposes, as follows: *D*, representing operating or process departments; and *A*, representing auxiliary or service departments.

A typical example of departmentalization, showing proposed symbolization, is given in Table I. The symbols may, of course, be varied to meet the requirements and conditions of individual plants.

**II. Process and cost-center allocation.** Because of the fact that each of the operating or process departments is composed of one or more individual functions, it is necessary to break down the expense into processes and cost centers. A "process" is defined as a single and independent operation within a department. A "cost center" is defined as two or more operations within a department, operating in dependent sequence.

For economy of effort in accounting, it is advisable, where possible, to set up cost centers within a department so that the number of accounts can be kept at a minimum.

A typical example of process and cost-center allocation, together with a proposed symbolization, is shown in Table II. For convenience, the letter "D" is dropped, as this allocation is confined entirely to the operating or process departments.

Variation from the processes, cost centers, and symbolization suggested can be made to meet the requirements and conditions of individual plants.

**III. Machine layout.** When the processes and cost centers have been determined, it becomes necessary to obtain the allocation of equipment to each. This can be accomplished by making a drawing to scale of the floor plant of the plant. This plan should show walls and partitions so that departments can be identified. On this plan should be drawn the individual machines in approximately their actual location. If conditions warrant, it is advisable to symbolize each piece of equipment as a means of identification for accounting and other purposes.

It should be noted that a study of such a plan in relation to the flow of goods through the plant may in many instances prove to be the means of bringing about economies.

When the allocation of equipment has been established, values must be obtained. This may be accomplished through the ledger account or by special appraisal. In any case, however, the sum of the valuations placed on processes and cost centers should approximate the cost of plant equipment as shown by the ledger.

**IV. Floor area.** As a prerequisite to certain distributions of expense, it is necessary to obtain the square foot area utilized by each process or cost center. This may be accomplished by apportioning the floor area on the floor plan of the plant mentioned above, to each process or cost center, preferably by distinctive colorings. It is not necessary to obtain valuations, except in cases where great differences in cost valuations exist as between buildings within the plant. In such instances, valuation should be used as the distribution basis.

**V. Principal expense divisions.** After the departments of the plant have been established, allocations to processes and cost centers have been made, and machinery and floor areas have been assigned so that all detail with respect to real estate has been determined, the problem now resolves itself into one of interpretation, charging, and distribution of expense to the departments, processes, and cost centers.

For convenience, it is suggested that all expense be divided into the following main divisions: 1. base expense or all expenses which vary with production; and, 2. burden expense or all expense which is fixed or semi-fixed

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**One branch of the textile industry which has suffered from lack of uniform cost methods is that devoted to bleaching, mercerizing, dyeing, and winding of yarn. In compiling a cost manual designed to meet that need, Mr. Fales, has rendered a distinct service of the industry. For this reason, the editors of TEXTILE WORLD are particularly glad to have the opportunity of publishing the manual serially prior to probable appearance as a book**

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**TABLE I. Departments with identifying symbols**

DG—Gray or receiving
DW—Boiling and bleaching
DM—Mercerizing
DD—Dyeing
DS—Splitting
DH—Drying
DB—Winding
DP—Packing
DL—Shipping
AC—Chemical laboratory
AG—Watchmen and labor bureau
AHP—Power and light
AHS—Steam
AL—Trucking
AR—Mechanical
ARS—Mechanical stores
AP—Planning office
AM—Main office
AS—Manufacturing stores
AXC—Color stores
AY—Yard
AW—Water

**TABLE II. Processes and cost centers with identifying symbols**

GRW—Receiving and preparing warp yarn
GRS—Receiving and preparing skein yarn
WLW—Linking warp yarn
WWW—Boiling, bleaching, and washing warp yarn
WWS—Boiling, bleaching, and washing skein yarn
WBW—Bluing warp yarn
WBS—Bluing skein yarn
NMW—Mercerizing warp yarn
NMS—Mercerizing skein yarn
DWW—Boiling boxes—warp yarn
DEW—Doubling warp yarn
DMW—Machine dyeing warp yarn
DHS—Hand dyeing skein yarn
DMS—Machine dyeing skein yarn
DPS—Package dyeing skein yarn
SMW—Machine splitting warp yarn
SHW—Hand splitting warp yarn
HCW—Can drying warp yarn
HHW—Room and hurricane drying warp yarn
HHS—Hurricane drying skein yarn
HKS—Drying silk skein yarn
BRS—Spooling cotton
BEP—Copping cotton
BBW—Beaming
BUW—Slashing
BNW—Quilling
BWW—Warping
BGB—Winding
BPB—Tubing
BFP—Winding camless cone
BLP—Reeling cotton
PPW—Packing warp yarn
PPS—Packing skein yarn
PBB—Baling (yarn already packe
PBB—Baling (direct to press)
PKP—Inspecting and wrapping
LSW—Shipping warp yarn
LSS—Shipping skein yarn

FIRST LETTER—Sub-department, as "G-Gray room"
SECOND LETTER—Process or cost center as ((R-Receiving and preparing"
THIRD LETTER—Type of yarn, as "W-Warp" or "S-Skein"

in its nature and does not vary with production.

A classification of each division is given in Table III. This classification represents a desirable one for budgetary control and other purposes to be explained later.

**VI. Compiling charges and distributions or allocations.** All the following suggestions and methods are predicated on the process or cost-center plan of unit costs, and the results obtained will represent actual cost. From the figures so compiled, standard costs can be established, as will be explained later.

Because of the fact that the expense of steam for heating the plant and some other items have a considerable influence, it is recommended that a six-months' period ending June 30 and Dec. 31 be used as a basis for unit costs. This allows for three cold and three warm months in each period, thus averaging the peaks which would occur by using a shorter period.

It is recommended that all direct expense incident to operating the plant be compiled in separate or cost records, the sum of such records to be journalized each month. This method makes necessary but two accounts in the main books, which are pay-roll and stores or clearing accounts. All purchases are charged through a voucher register or other method to stores or clearing account, and all checks for pay-roll to pay-roll account. Such accounts may be broken down into more detail if desirable, but the best policy is to maintain these at a minimum. The credits to these accounts will be supplied by the cost journal mentioned before, and the balance of the pay-roll account will represent monies unpaid at the end of the period, assuming a calendar month.

Proposed forms for such plant records will be given later. It is necessary, of course, to open accounts in the main books for all expense compiled through the stores or pay-roll accounts, which represent increment to capital or other items not strictly operating and which do not become a part of cost of plant operations.

Compiling of these plant records is best accomplished by the use of time and stores issue cards, particularly in the larger plants. Otherwise, distributions of labor must be made by use of the pay-roll and stores by the setting up of inventory accounts in each department, which resolves itself into a rather expensive job, with the disadvantage of probably greater error.

The time card should be issued daily and may be simple in design or more elaborate to meet conditions in the different plants. A time card designed to cover wage payments, charge accounts, and production records will be illustrated in the next installment of this manual.

When a workman's job is changed during the day, it is preferable to change cards, such cards to be stamped on a time clock for this purpose so that the elapsed time can be measured. This may also be accomplished by using a single card each day and splitting the time on such card. The latter method works to a disadvantage where much detail is required in the recording of production.

From these time cards are compiled department pay rolls, labor distributions, labor statistics, and—in most cases—production records, as will be explained later.

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*(The next installment of this manual will discuss the allocation of stores and other expenses.*—Editor.)

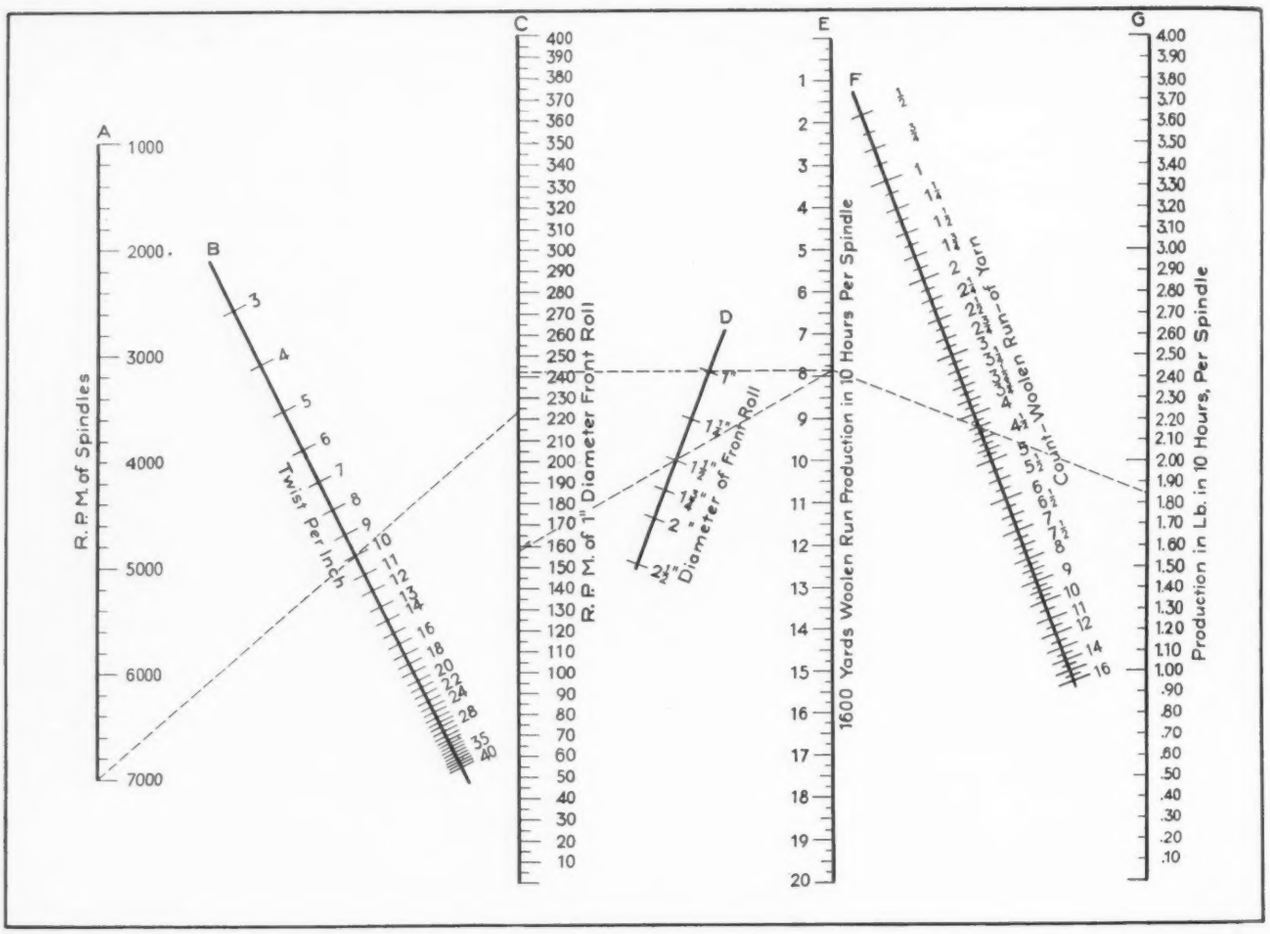
**TABLE III.**
**Classification of base expense and burden expense**

*Base Expense*

a. Direct or classified labor
b. Indirect or unclassified labor
c. Supply labor
d. Sweeping, scrubbing, and cleaning labor
e. Repair work on yarn
f. Direct materials used
g. Drugs and color used
h. Miscellaneous materials used
i. Maintenance and repairs
j. Claims paid
k. Freight and expressage paid
l. Social taxes

*Burden Expense*

a. Foremen and clerks
b. General supervision
c. Fixed charges: Real estate
   1. Insurance
   2. Taxes
   3. Interest
   4. Depreciation
d. Interest on stores inventory
e. Interest on fuel inventory
f. Planning and main offices
g. Administrative expense (detailed later)




# A Nomograph for Woolen Spinning

## Saves overseers' time in calculating production; applicable to twisters

BY S. V. MEHN*

**TIME SPENT ON DETAIL** is something that every overseer and superintendent begrudges himself; it is something that every overseer and superintendent would like to get away from—far away from—so that he could more thoroughly supervise the processes for which he is responsible. Time out to make calculations of machine speeds or productions usually is one of the much-lamented duties of an overseer, and rightly so since tables or charts such as the one shown on this page enable him to cut this chore to the point of almost non-existence.

The chart requires one arithmetical operation, and also that the user have correct information for scales *A*, *B*, *D*, and *F*. However, it is possible to use the chart to find any of the factors if the user has knowledge of four of the factors and no three of these are located on adjacent scales.

A straight line through the proper points of scales *A* and *B* will cut scale *C* at the point representing the required speed of a 1-in. front roll. The dotted line shows that a spindle speed of 7,000 r.p.m. requires 223 r.p.m. of a 1-in. roll when inserting 10 turns per inch. At this point the arithmetical calculation must be made: Divide the roll speed by 1—% yarn contraction. Thus, if contraction is 8%, 223 ÷ 0.92 = 242 r.p.m. of a 1-in. roll.

If the roll diameter is not 1 in., but is, say, 1½ in., roll speed is found by laying a straightedge from the proper point on *C*, in this case 242, through 1 on *D* and reading the woolen run production on *E*, which gives 8.2 in the example; then, another straight line back through 1½ on *D* cuts *C* at the r.p.m. of the 1½-in. roll, which is 158. Thus, a 1½-in. roll at 158 r.p.m. gives the same production as a 1-in. roll at 242 r.p.m.

A straight line from the run production on *E* through the yarn count on *F* gives pounds production on *G*. Thus, if the yarn is 4¼s, the production will be 1.84 lb. per spindle per 10 hr.

*Note:* The original chart supplied by the author measures approximately 12 x 16 in. If 25 or more readers desire charts of that size and will so advise the Technical Editor, TEXTILE WORLD, 330 West 42nd St., New York, we shall be glad to have copies made and supply them gratis. A few more copies of similar nomographs for cotton and for worsted, which appeared in the August, 1940, and January, 1941, issues, are also available.

* All rights reserved by the author.

# What Is the Correct Lubricant?

## For protection of cotton machinery and reduction of operating expenses

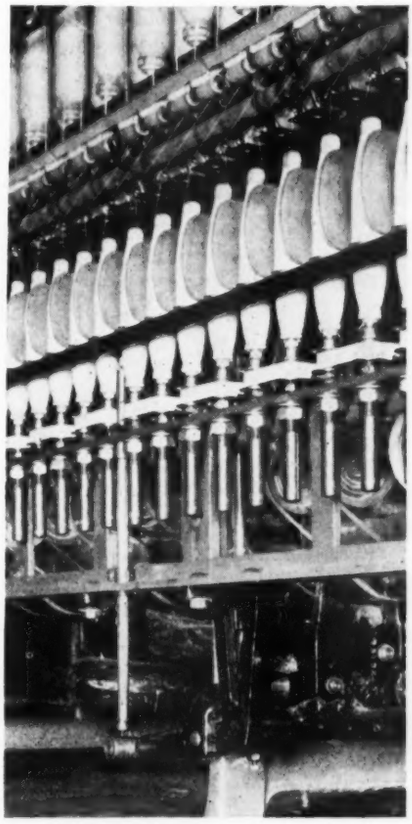
By WILLIAM C. FORBES

**LUBRICATION** of bobbin-shaft bearings on roving frames calls for use of a lighter bodied oil than that used for general purpose oiling. Bobbin shafts revolve at comparatively high speed and the step bearings should be filled with spindle oil having a Saybolt viscosity of about 90 to 120 sec. at 100° F. Use of heavier bodied oils results in unnecessary "oil drag" which costs money to maintain on hundreds of bobbin spindles.

Coming now to the spinning room where the use of oil is universal, some interesting problems in lubrication arise. In the majority of mills, more than 50% of the power is absorbed in spinning operations and, for this reason, it is very helpful to understand the fundamental principles of fluid friction within lubricating oils. Spindles operate at speeds as high as 10,000 r.p.m., and few operate at speeds below 5,000 r.p.m. Hence, fluid friction on hundreds of spindle bearings is an important item to consider.

Oil films are produced and maintained by the revolving shaft, which drags the oil around and thereby builds up a hydraulic pressure. This phenomenon is, of course, common to all bearings, but at high speed the hydraulic pressure on the oil is so great that the very lightest bodied oils can easily float a pressure of half a ton to the square inch. Since oil has friction within itself, it is obvious that heavy bodied oils produce excessive dragging action and, by their inability to follow the shaft with sufficient rapidity, they actually become hot and use up excessive power.

For ring spindles, baths should be filled with an oil of very light body; e.g., an oil having a Saybolt viscosity of 65 to 90 sec. at 100° F., but oil for mule spindles may have to be a little heavier in body, and it is generally found that one with a Saybolt viscosity of 90 to 120 sec. at 100° F. gives most satisfactory results. However, high-speed spindle operations are not all alike, and there are even cases where a white or semi-white mineral oil gives superior results, particularly on ring spindles. This is due to the fact that such oils contain very little of the property known as "oiliness" and, therefore, produce less fluid friction. At high speed, fluid friction occurring within the lightest normal spindle oil may produce overheating on some spinning operations. Hence, an oil containing less oiliness may be required to overcome the difficulty. This is accomplished by using a white or semi-white oil of light body; e.g., an oil having a Saybolt viscosity of 75 to 100 sec. at 100° F. The slight amount of oiliness is sufficient to cause adherence to the shaft, and the high shaft speed creates ample hydraulic pressure to maintain a strong oil film which prevents metal-to-metal contact.



Proper spinning-room lubrication is important since in many mills spinning operations consume more than 50% of the power

As a matter of interest, white oils are manufactured by treating mineral oil with strong sulphuric acid, eliminating the acid, then filtering the treated oil through clay (Fullers earth) until the desired degree of whiteness is secured. Each step reduces the oiliness or lubricating value within the oil. By continuing the filtration and refining process, medicinal type oils are secured.

Spindle oils should be of good quality to eliminate the formation of gummy deposits. These deposits occur as a result of oxygen in the air combining with the oil to form a product which, for want of a better name, is termed sludge, gum, varnish, etc. Needless to say, such deposits cause overheating and waste of power. The best cleanser for spindle bearings is carbon tetrachloride, which is available in every town and village. This product quickly dissolves gum- or varnish-like formations and is superior to other solvents, even kerosene, for this purpose. Also, carbon tetrachloride has the advantage of being non-inflammable, which makes its use safe in the hands of practically anyone.

For the spindles of twisters, spoolers, and winders, a slightly heavier bodied oil is required than for ring spindles. As for mule spindles, a Saybolt viscosity of 90 to 120 sec. at 100° F. generally will be found suitable.

Warpers, slashers, looms, etc., operate at moderate speeds and the bearings on these machines require no particular comment which has not been outlined in previous paragraphs. Elimination of staining during weaving is, of course, important; and to minimize oil throw, fluid greases or similar type lubricants sometimes are preferable to straight mineral-type bearing oils. To cover all of the special problems that arise from time to time in mill lubrication would be impossible in this brief outline of fundamental principles. However, there are few problems in bearing lubrication which cannot satisfactorily be solved if general principles are understood.

**A previous article on this subject, relating to lubrication of cards, drawing frames, combers, and other preliminary equipment, appeared in the December, 1940, issue of TEXTILE WORLD.**

# Cotton Fabric Defects

## Would result in much less trouble if standard nomenclature were adopted

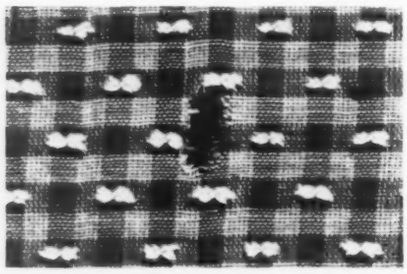
**PICTURES OF DEFECTS** in woven fabrics, together with suggested definitions of each imperfection and a discussion of causes and methods of prevention, were presented in articles in the March 1939, May 1940, and November 1940 issues of TEXTILE WORLD. These articles emphasized the value to all parties through whose hands the goods pass of a standard nomenclature for various defects. The reception accorded those three articles, in the form of requests for reprints, prompts this fourth article containing pictures and descriptions of six additional defects. Incidentally, the sixteen defects described in the March, 1939, issue have been reprinted in the 1940 edition of "A.S.T.M. Standards on Textile Materials" developed by Committee D-13 of the American Society for Testing Materials.

As a means of avoiding misunderstandings between the various departments of mills, and between mills and subsequent handlers of fabrics, a standard definition of each defect is of inestimable help. Then, when defects are reported, the overseer or other mill executive receiving the complaint knows that the complainant is speaking his language, and that the defects named in the complaint are as he understands them.

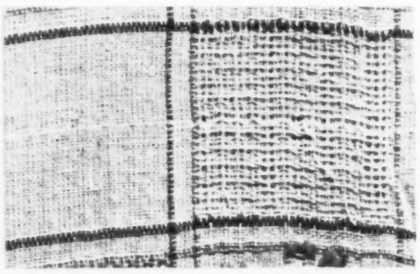
Much time could be saved in correspondence, or in fewer trips to the cloth room, and shipping charges on cloth returned for inspection could be cut to a minimum if each mill made a point of such standardization.

It is probable that eventually Committee D-13 will adopt standard definitions for all the more common defects. Until such time, it will be advantageous if each mill or group of mills comes to an agreement with its selling agent as to the nomenclature to be applied to fabric defects.

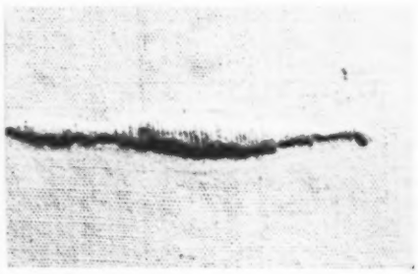
As pointed out in a previous article, to make sure that all defects are called by their correct names, it is sometimes advisable to weave pieces of cloth containing all the common defects, to label the imperfections correctly, and to distribute the pieces to the parties concerned. Several such samples, displayed at points about the cloth room, are of great value to graders in listing defects correctly, and such a sample in the hands of the selling agent greatly reduces telephone, telegraph, and shipping expenses. A second method is that of photographing defects and distributing the marked pictures in the same manner as the pieces of cloth. Such samples or photographs placed in convenient locations will prove valuable as a reference and will aid in the elimination of misunderstandings.



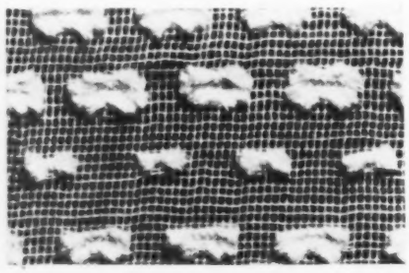
**Shear hole**—*Appearance:* Neatly clipped out holes in fabrics, such as clipped-spot ginghams, which are run through a shearer. *Causes:* Foreign body, usually gout or lint, getting under fabric and raising surface high enough for blade to cut off protuberance. *Remedy:* Keep fabric clean as it goes into shearer.



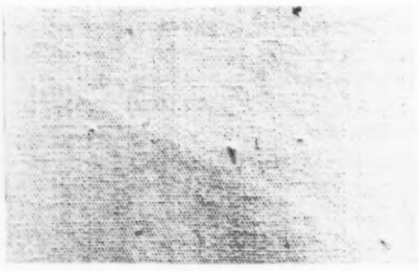
**Hook trouble**—*Appearance:* Narrow thick place running filling-wise across fabric, with two or more picks together; the defect is particularly noticeable in sheer fabrics, but less noticeable in heavier fabrics. *Causes:* Dobby hook getting out of place, or peg out. *Remedy:* Bend hook so that it will stay in place.



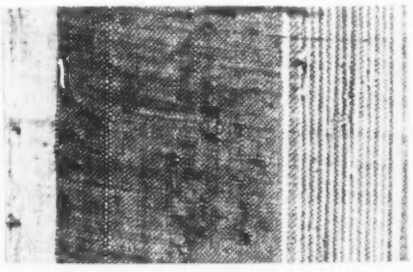
**Gout**—*Appearance:* Foreign matter in fabric, usually lint or waste. *Causes:* Not covering looms, and particularly warps, when blowing down from overhead, or careless handling of air hose in daily cleaning. *Remedy:* Proper covering of looms when blowing down overhead, and careful handling of the air hose.



**Overshot in marquisette**—*Appearance:* Clipped spots containing fewer picks than the design calls for. *Causes:* Shuttle riding on top of shed, filling breaking without loom stopping, shuttle emptying without proper change. *Remedy:* Repair filling-stop motion, check harness for proper position.



**Looped thread** — *Appearance:* Small loops in the filling yarn which are spaced at irregular intervals over the surface of the fabric. *Causes:* Improper winding of the filling yarn on the bobbin. *Remedy:* Correct the settings on the spinning frame or loom bobbin winder so that the filling is wound on the bobbin correctly.



**Picked-up fabric** — *Appearance:* Small picked-up spots extending several inches in from the selvages giving the cloth a rough, potato-grater effect and feel. *Causes:* Faulty temple roll with bad burrs. *Remedy:* Repair or replace temple roll. (Fabric also has misdraw near outside of stripe next to selvage.)

# Finishing Spun-Rayon Suitings

## Proper arrangement of machinery reduces number of operations and costs

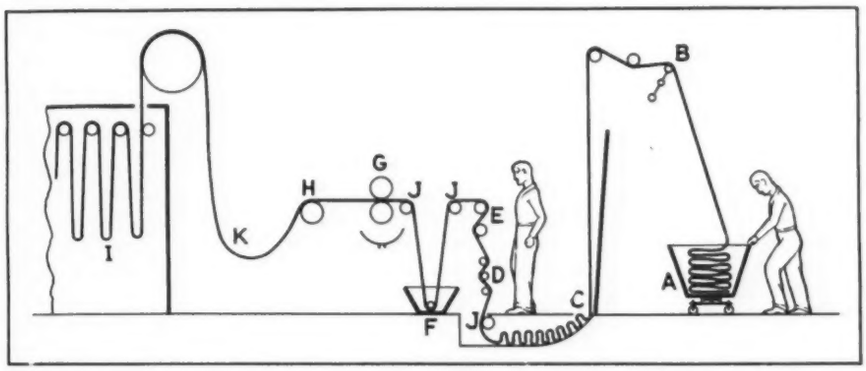
By PHILIP LeBRUN

**SPUN-RAYON SUITINGS** for women's wear continue to grow in popularity. Types of fabrics woven from mixtures of viscose rayon staple with acetate rayon staple, wool, or both include homespuns, checks, and stripes. The average better-class spun-rayon suiting will weigh between 32 and 50 lb. per 100 yd., depending on the type of cloth, the price range for which it is intended, etc. In appearance and handle these fabrics bear a close resemblance to the more expensive all-wool materials, and the average layman cannot detect any difference except by the price tag or label.

Several different methods are employed for preparing spun-rayon suitings for dyeing. The most commonly used method is to reel up the fabric and boil it off in hank or skein form. Most warps for suitings are starch sized to facilitate weaving, and the starch should be removed before any attempt is made to dye the fabric. Since a large part of the heavier suitings are scoured in skein form, the easiest and most economical means of handling is to add the enzyme used for desizing to the presoaking bath. After soaking at 120° F. for 30 min. or so, the cloth is transferred to the boil-off or scouring bath. Boiling-off takes from 1 to 2 hr., depending on the type of bath and the particular cloth being handled. A final wash or rinse completes the scouring process.

A small percentage of suitings is dyed on jigs or padders, but by far the larger percentage is dyed on reel dyeing machines. The dyeing machines used for suitings are deeper than those intended for dress goods. Suitings dyed in boxes intended for dress goods will drag on the bottom of the dye-beck and cause chafe or drag marks, because the 26- to 30-in. working depth in such boxes is insufficient to float the heavy plaited cloth. A depth of 36 to 42 in. seems to be satisfactory, without increasing the volume to the point where there is excessive waste of steam and dyes.

With proper arrangement of machinery and a few changes in existing equipment and methods it is possible to omit some steps ordinarily taken in finishing and to combine others, thus reducing material and labor costs. The procedure recommended is as follows: As the suiting comes off the dye box five pieces are placed in one deep swivel truck with the ends hanging out. This is pushed directly to the sewing machine. After the pieces have been sewn together and end cloths put on, the truck is pushed to the opening-up reel or a scutcher which is arranged in tandem as shown in the accompanying sketch. Recently a new type of de-twisting machine has been introduced which can be employed in place of the opening-up reel or scutcher. If an opening-up reel is employed it should be placed as near the ceiling as possible to facilitate untwisting of the dyed material.




Equipment layout (not to scale) for finishing spun-rayon suitings: *A*, swivel truck; *B*, scutcher; *C*, J-Box; *D*, tension bars on frame, latter not shown; *E*, suction slots striking both face and back of cloth; *F*, finish impregnating tank; *G*, quetsch (finish is returned to tank, *F*, from opening in pan); *H*, draw roller; *I*, loop dryer; *J*, guide rollers; *B*, *G*, *H*, and *I* are driven

The cloth, after opening-up to full width, drops to the J-box, *C*, and then goes to the vacuum slot, *E*. The latter is connected by a Y-joint to a vacuum pump. In this way it is possible to apply vacuum consecutively to each side of the fabric. From the vacuum slot the material goes directly to the size box. The excess size in the cloth is next squeezed out by the mangle before the fabric goes to the loop dryer for final drying.

Cloth is allowed to accumulate only in the J-box. The mangle and dry box are so synchronized that a slight loop is formed in the fabric at point *K*. The cloth must not be allowed to accumulate on the floor at this point, as this might cause crack marks or size breaks in the goods. After drying, the cloth is framed and decatized. The two operatives shown in the sketch cooperate in adjusting speeds of the units.

The size box, *F*, is fed by gravity from a barrel or tank placed at one side. As the size solution is gradually diluted by the water in the material being sized, it is necessary to feed a more concentrated solution than is in the box at the start of the sizing operation. Experience over a period of years has shown that making the feed liquor about one-third stronger than the starting liquor usually will keep the size solution uniform until it is too discolored to be of further service. This is based on fabrics containing their own weight of water after vacuum extracting. The size squeezed out by the mangle passes through a cloth screen before it again enters the size box.

The size used for suitings should make the cloth somewhat firmer, but not stiff; more resistant to perspiration; and more resistant to wrinkling and creasing. A typical finish, which is semi-permanent in nature, consists of 3 lb. thin-boiling chlorinated starch, 1 qt. 75% sulphonated olive oil, and 1 qt. 40% formaldehyde to 50 gal. of water. This formula will probably need some adjustment for different fabrics and mill conditions, but will be effective on the average suiting.

# Less Waste Means More Profits

## In worsted yarn manufacture aim should be to cut losses and improve quality

By John C. Lowe
Lowell Textile Institute

**"IF A MILL COULD** reduce its waste ½%, profits would be increased 1%." That remark, by the late A. W. Thompson, of Parks-Cramer Co., relates to waste of raw material which could but does not enter into the finished product, and forms the subject of this article.

Losses occur during top making, drawing, and spinning. In top making the important processes are sorting, scouring, carding, backwashing, gilling, and combing. Each process contributes its quota to the value of the top, increasing or decreasing its worth to the spinner. Correct processing is necessary at each stage in order that best results may be obtained and waste kept at a minimum in following processes. It is vital that production in one department should never be obtained at the expense of a later department. The object from sorting to spinning shrould be production of yarn at lowest possible cost. For example, it is certainly not profitable to save 1¢ per lb. in making top and later lose 2¢ per lb. making yarn from that top.

When wool is sorted, the yield of the main sort is important. If the yield is pegged at a certain percentage regardless of limitations, the comber may increase his yield of top; however, he may have not only a reduced tear, but also a top which will cause increased waste in drawing and spinning. The sorting room is a good place to start reducing noil and flyings.

Shrinkage during scouring and noil from the comb are not classed as waste. On the other hand, the percentage of noil from the comb and the amount of good fiber in burr waste from the card will both be increased by careless processing and such increases are waste.

**PROPER SCOURING METHODS** are important in minimizing waste in later processes. Wool should not be overscoured or dried at too high a temperature. Quick drying should be avoided, and when the wool leaves the dryer, it should contain from 20 to 30% of moisture. In addition, from ½ to 2% of oil should be sprayed on it as it leaves the dryer apron. Using too high temperature and an excess of alkali will make the wool harsh, affect its color, and may tender it. Such wool will cause increased card waste, produce more short fiber in carding, increase noil at comb, and increase waste in both drawing and spinning, especially flyings and rubber waste. In the French system such wool will create more static with its resultant effects. Overscouring is dangerous, because it removes not only extraneous matter from the fiber, but also some of the natural oil. Everything should be done in scouring to preserve spinning properties and maintain the color of the wool.

Never economize in scouring at the expense of the quality of the scouring. Too high a production may cause a discoloration of the wool and felting, rolling, or matting. Be sure that all alkali is removed before the wool enters the dryer. In the dryer the alkali becomes more active and may damage the fiber. Every precaution taken in scouring to preserve the valuable properties of the wool fiber and send it to the card in ideal condition will have its effect upon reduction of waste in later processes.

The sorting room is a good place to start reducing noil and flyings

**CARDING** is the most severe process through which the wool fiber passes in yarn manufacture. What happens that is likely to increase waste and noil, depends upon many factors. These include the wool itself; its condition—harshness, moisture content, percent and efficient distribution of oil, and kind of oil; and card speed, clothing, setting, and production.

The card itself may not make much waste, but it can be a source of increased noil at the comb and increased waste at every subsequent process, if fibers are broken in the card. Likewise, the average length of the wool can be seriously reduced by careless and oversevere carding.

Research indicates that most fiber breakage in carding occurs in the forepart of the card. One mill reduced noil 2% by wider settings and reduced speeds on the forepart of cards used for fine wools. Extra pairs of feed rolls, opening rolls, and even gilling heads have been introduced in the forepart of cards to reduce fiber breakage. Both moisture and oil play important parts in preservation of staple length and reduction of flyings. Oil makes the fiber more supple and reduces friction. Moisture increases the extensibility of the fiber, neutralizes static, and reduces flyings. High speeds, too close settings, and lack of moisture in the fiber will cause excessive breakage. If settings are not close enough, increased neps may result. Use settings which result in minimum noil at the comb.

Card equipment will largely determine the amounts of burr waste, card waste and strippings. 25 to 30% moisture in wool as it enters the hopper, 70 to 75% relative humidity, 75° F. room temperature, cards not cold to the touch, and from 1½ to 2% oil are recommended conditions.

**WASTE IN BACKWASHING,** gilling, and combing is not very great, usually approximately ½ to 1%. Noil, which is a byproduct of combing, is an item which should be watched most closely. Any excess in noil that is traceable to faulty

processing is an expensive form of waste. To minimize noil it is necessary to parallelize and straighten the fibers by gilling. In addition, gilling reduces fiber strain during combing and so decreases fiber breakage. Insufficient gilling before combing results in increased noil. Actual mill tests indicate that at least three operations of gilling are necessary, using a draft of 7.5, to reduce noil to a minimum. For fine wools, intersecting gill boxes will be required when such a draft is used.

How much can noil be reduced by careful carding and good gilling? One large French yarn mill asserted that noil had been reduced 2½% by change in speeds and settings of cards. In another mill a reduction of 1½% noil was said to have been effected by efficient gilling. In a third, improvements in carding and the introduction of two operations of intersecting gilling resulted in a 3½% noil reduction in Noble combing of fine wools. This does not mean that the top contained 3½% more short fiber; efficiency in scouring and carding preserves length, while gilling arranges the fibers so that more fibers pass into the top. Staple analysis of tops will show what happens when noilage is reduced; there is not much sense in reducing noilage 2% if later the saving is lost in flyings and other waste.

Because percentage of waste is small, and because such waste is returned to carding or scouring for reprocessing, does not mean that the amount made and the loss it represents can be ignored. Comb waste amounting to 1% means that 1 hr. out of every 100 must be spent on reprocessing.

Don't overload backwashers. See that stock leaves drying cylinders with the right amount of moisture for gilling. Excess moisture can be the cause of increased waste at the first gilling following backwashing. Keep pins and aprons in good condition on combs and gillboxes. Watch length of comb bits; comb bits 6 in. long mean ½% comb waste. Sometimes waste at the comb alone will reach 1%, which is excessive for Noble combs (on French combs piecings can be made without removing waste ends).

It will be noted that the power of the top maker to influence percentage of noil, and indirectly percentage of waste in drawing and spinning, has been stressed and emphasized. It is the belief of the author that intelligent research applied to both scouring and carding will result in better processing, preservation of valuable spinning properties, and reduction in noil and waste.

[*The second and concluding installment of this article will appear in an early issue.*—Editor]

# Reduce Bobbin Costs

**DO YOUR BOBBINS** last as long as they should? Is your superintendent the only man in your plant who ever picks a bobbin off the floor? Is a broken bobbin of little consequence to your help, and is a warped bobbin merely one to break and throw away? One bobbin does not cost much, but the total of your yearly bill for bobbins is considerable. These, and other points, are discussed in an article in the April issue of *Cotton Chats,* published by Draper Corp., Hopedale, Mass. An abstract of the article follows:

Two similar mills, both of which buy quality bobbins, show a striking contrast in bobbin costs. In five years the first mill, with something over 1,600 looms, has bought for regular replacement more than 1,500,000 bobbins. The annual average was 315,000, or over 190 bobbins per loom per year. The second mill, running on coarser goods and with 250 more looms, has bought 100,000 bobbins annually—an average of 52 per loom per year. Bobbins cost the second mill, $8,000 to $10,000 a year less than its neighbor. Evidently there is a chance to save on costs by teaching your help proper methods of caring for bobbins.

Education in the care of bobbins should start with some knowledge of wood and how it reacts to changes in humidity and temperature. Bobbins leave the shop with approximately 8% moisture content—the natural average. The best wood is full of inequalities that set up divergent internal stresses with every change in humidity or temperature. Though the bobbins may be accurately made from stock that is scientifically dried and aged, they are subject to constant changes. As a rule, bobbins pick up about 3% moisture after a short time in the mill; this usually means an increase of 0.005 in. in diameter. If improperly stored, or if exposed to improper conditions, they will swell or shrink much more, and may warp severely.

Cases of bobbins should be opened as soon as received and the bobbins should be put in use or in proper storage, with each one free to expand or contract with little bad effect. If left in shipping cases or deep bins, pressure of the bobbins one on another causes permanent warping.

If bobbins could be kept spread on the floor of a room at 70° F., without artificial heat, it would be ideal. This should be approached as nearly as possible. Hot, dry air is as bad as air that is too moist, because bobbins unnaturally dehydrated will swell and warp when exposed to normal weave-room humidity.

The best practical storage is in shallow bins not over 18 in. deep. Wire or canvas baskets 16 in. or 18 in. deep are satisfactory if well ventilated and never piled up without cross-pieces between.

Damaged and worn tips and butts cause many weaving troubles, particularly those resulting from incompleted transfers. Care should be taken to minimize wear on the ends of the bobbins. It is bad spinning room practice for doffers to use a board to batter down bobbins on the spindles because tips are chipped, or broken, or badly worn. If bobbins are moved from the spinning room to the weave room in chutes, the tips and butts will be damaged if the drop is too sudden or too long.

Bobbin-cleaner jaws will damage bobbin barrels if they are incorrectly set. Check the jaw settings at intervals.

A serious loss of bobbins in the weave room comes from bobbins that fall on the floor and are left to be stepped on or run over by trucks. Improper boxing of the shuttle, incorrect setting for the transfer, or a poorly set bobbin disk may cause bobbins to be thrown out on the floor. Bad bobbins cans should be replaced, and improperly set cans should be properly set.

It is a good plan to have bobbins looked over periodically by someone who is qualified to make a real inspection. In some cases the condition of the bobbins has made a difference of ten picks in the speed of the loom.

Top bushings are recommended for enameled bobbins. With a shellac or lacquer finish, where there is no finish in the top bearing, tops may close in and require frequent reaming unless top bushings are used.

The distance from the bottom of the bobbin to its first ring is important for good weaving. Wear reduces this distance, which makes trouble for your weaver and shortens the bobbin so that it cannot be used. A brass shield for the base of the bobbin prevents this wear and is worth the extra price when bobbin butts wear quickly. In mills where it is difficult to prevent undue tip wear, a brass tip shield should be used. Both shields are helpful when penetrating liquids are used in yarn conditioning. Without the protection they afford, the liquid may be absorbed by the ends of the wood fibers in the tips and butts, and any such absorption causes the wood to become spongy.

# Throwsters' Headaches

## With combination yarns: what they are, and ways in which they can be reduced

By C. W. BENDIGO
Judson Mills

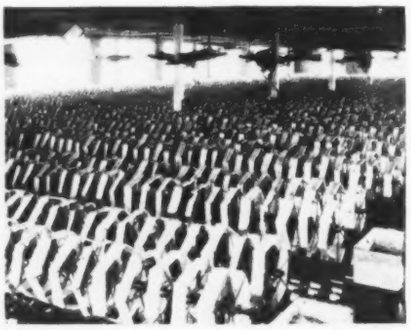
**BAD PLYING** causes throwsters running combination yarns more defects and more trouble, year in and year out, than anything else. Bad plying appears as strip-backs, which are also known as skinbacks, caterpillars, and by various other terms; and, in its clearer forms, as loops, kinks, and spirals. The primary problem is that when combining and twisting, the crepe end contracts differently from the acetate. Loops, kinks, and spirals are caused either by failing sufficiently to correct the feeding of each of the two ends in combination or by overcorrecting. This problem of correcting the feeding is most difficult, since practically all rayon combinations are run on doubler-twisters with single-speed feed rolls. It is further complicated by the general practice of running combination yarns in two operations. In the second operation, up-twisting, no control whatever can be had on the single ends, since the yarn is already plied, yet uneven contraction between the two ends continues with each turn inserted.

One is often asked, "What should be the relationship between the acetate and the crepe ends in a combination?" That sounds like, and is, a hard question, for no one can answer that the acetate should be such and such per cent of the crepe, unless the question includes data on deniers, filaments, turns, manufacturers, soaking formulas, and tensions. The relationship should be such that in the final yarn each end will bear as much as possible of its share of the strain. A difficult angle to this is that one cannot be sure that the ply is correct except by constantly testing the completed yarn.

Proper tensioning in production of combination yarns is important in preventing acetate loops and crepe kinks. With too little tension, the crepe component contracts, even to the extent of forming snarls, while the acetate puckers. Sometimes these defects straighten out when tension is applied in later operations; but this, too often, is accompanied by damage to the crepe at the places where it kinked, resulting in the yarn being blamed for having weak places that cause strip-backs.

It is easy to imagine the trouble that can be caused by combination yarns which are overstretched due to excessive tension. Unless the throwster catches this stretching, either when checking tensions or by observing broken filaments, he usually will not know about them until complaints come in of streaky warps or filling bands. Even then it is not always clear that excessive tension in throwing caused the streaks and bands.

Defects resulting from stretching are among the most insidious confronting the throwster. On the surface it seems that stretch should be relatively simple to keep under reasonable control, until it is recalled that practically all rayon combination yarns are run in two operations: doubling the yarn on a ring twister while inserting a low number of turns, and the bringing up of this yarn to full turns on a silk type up-twister. In the first operation the tension normally becomes less as the take-up bobbin becomes fuller. Thus the yarn run with the lightest tension is on the top of the doubler-twister bobbin. When this doubler-twister bobbin is placed on the up-twister for the second operation, it starts off with a light tension which normally builds up as the yarn runs off. Thus, the yarn which was subjected to the most tension in the first operation is also subjected to maximum tension in the second. And conversely, the part that had the lightest tension in ring twisting also receives lightest tension in second-time twisting. This very often causes acetate loops at the start of the second-time twisting, or it may appear occasionally as crepe kinks in the first operation. The most prevalent form of this defect is seen in the cloth as either long or bunched loops of acetate.



Causes of throwsters' headaches include bad plying, improper tensioning, low humidity, and knots

**BROKEN FILAMENTS** are another common defect in combination yarns. In using acetate that contains an opposite twist from the crepe and ply, yarn defects in the form of loops are sure to appear unless correction is made in feeding the yarn, which usually is done with tension. In such cases, the acetate tends to form more of a sheath around the crepe than would be the case with acetate originally having the same twist direction. This sometimes is desirable for a particular effect, but unfortunately broken filaments generally accompany it. Such combinations are prone to have many more broken filaments than the conventional. Low humidity will aggravate any broken filament condition and is often blamed for causing it. Bobbins not centered to rings on doubler-twisters also cause this defect.

Opposite-twist acetate and excessive tensions are by no means the only causes of broken filaments. Wrong or worn travelers account for many cases of broken filaments. The trouble reoccurs, since the fit of the traveler needs changing as the ring wears. Selection of proper travelers for combination yarns is a study in itself. Proper design prevents broken filaments from this cause, except when travelers are threaded backwards, which results in a great many broken filaments. It should be remembered that this is one common defect that can be, and often is, caused in other than the throwing department. It happens generally either by the yarn striking something it should not, or by its being run over a damaging surface.

Strip-backs in combination yarns result from numerous causes. They can be caused by waste, slubs, or knots either in single ends or in the combination. Excessive knots due to the small package size of some machines are now frequently being considered defects. Also, knots cause many skinbacks, due to the harsh crepe end biting through the acetate. Mechanical knotters kept in good condition can help the throwster prevent strip-backs at the knot, but better still is to have operatives test each knot tied and note particularly that both ends tie smooth on each side of the knot. A sure cure is knotless yarn.

Abstract of paper presented at recent meeting of American Association of Textile Technologists.

# FIXING HOSIERY MACHINES

## FULL-FASHIONED MACHINES — Chapter VIII (continued) The Catchbar

By WALTER A. SIMOND

**THE CATCHBAR TIMING** for knitting, in its horizontal movement, must be correct in relation to the top of the needles as they move upward, to make good selvages. Of the two key positions in the selvage cycle of the needles, the press position was described and illustrated (Fig. F4) in the September, 1940, issue of TEXTILE WORLD. As shown in Fig. F15a, (April, 1941, page 75) when the needles draw downward for the press, the friction of the yarn and the widening of the needle eye tend to draw the selvage stitch down toward the knockover bed. Since the yarn leading up from this lowered stitch lies obliquely across the eye of the needle, it becomes necessary to press in a relatively low position in order that the tip of the beard of the selvage needle can enter the needle below the oblique yarn of the newly kinked stitch and above the old stitch on the stem of the needle, as shown at needle 4 of Fig. F15c. If the needles press too high, both stitches will be cast off; if too low, both may pass under the needle beard.

### CHAPTER IX

### The Coulier Motion

**THE COULIER PITMAN** must be accurately balanced with its center line intercepting the center line of the Coulier camshaft, as shown in Fig. F17, in order to have the slurcam action and carrier lead the same in both directions or equalized. The Coulier cam, approximately at the point of starting, marked *SP*, must contact one of the pitman rollers exactly at the beginning of every one-half revolution of the cam and also at exactly the same point on the cam. At erection or in readjustment of the Coulier motion, the pitman is set first, in the following manner: The long lever is brought to a perfectly plumb position ("centralized") with the cam down so that a level may be laid on the top of the pitman rollers, which must be of the same diameter. Then the pitman may be leveled by turning the eccentric stud at the top of the short rocker lever, or by other means of adjustment. Only at the center of a correctly constructed Coulier motion can the pitman lie absolutely level. This is because the long level end of the pitman moves in an arc below, and the short level end in an arc above, the horizontal center line through the pitman and camshaft. The resulting motion of the pitman is from the inclined to the horizontal and back to the inclined for each complete stroke, as indicated by the broken lines in the diagram, Fig. F17. Except at the center of the stroke, the long level end of the pitman is always lower than the short lever end; and the pitman rollers rise and fall in a rocking motion which the contour of the Coulier cam must accommodate. At the end of each pitman stroke the short lever end is about $\frac{3}{4}$ in higher than the other end, and it is therefore necessary that the long lever be centralized when setting the pitman by leveling.

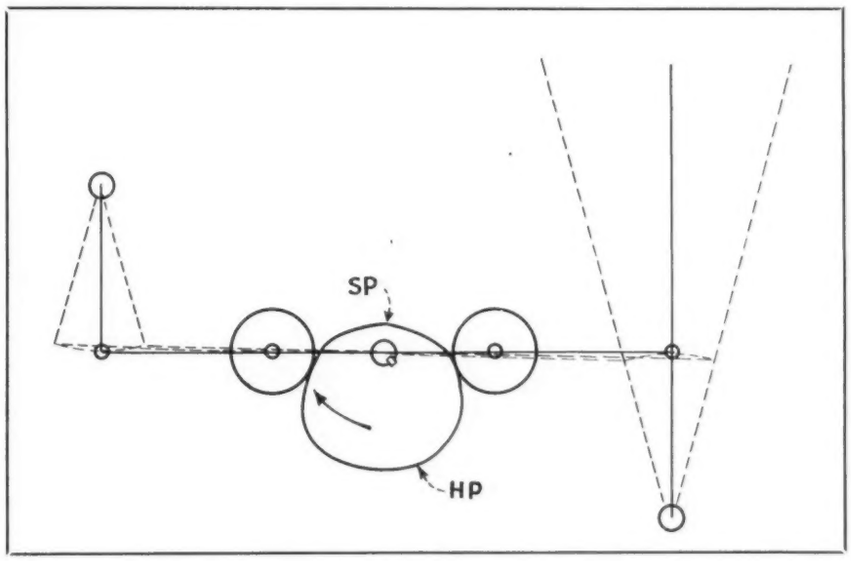



Fig. F17. Rear-view diagram of Coulier motion

**THE PITMAN ROLLERS** are adjusted next, when they are in contact with the high point of the Coulier cam, marked *HP*. The machine is turned to bring this high point against the rollers successively, and the rollers are carefully adjusted to equalize the slurcam strokes. A clearance between the opposite roller and the cam at the high point setting of 0.02 in. is generally recommended. The rollers are adjusted, through use of the roller studs, so that at the extreme ends of the Coulier stroke there will be from 0.021 to 0.025 in. between the rollers and the Coulier cam. Great care must be taken that the pitman rollers do not bind the cam, with serious breakage as a result. The best method of equalizing the pitman-roller adjustment is to stop the machine where the last sinker in a head is fully drawn; put a camshaft cam gage on, at a convenient length, over a camshaft coupling; and make a temporary mark on the coupling; then test this position against the opposite side of the sinker head with its last sinker fully drawn.

Whenever the above test shows that the Coulier motion cannot be equalized, it is proof that the pitman is not correctly balanced, and it will be found that the center of the Coulier camshaft and the center of the pitman pin in the centralized long lever are not of the same height, or a slippage of the short rocker setting has occurred. To correct the setting of the motion, check the short lever setting and, if it is right, then centralize the long lever with the Coulier cam up, remove the

pin from the short lever end of the pitman, and drop that end to the floor. Now, set a surface gage on the back beam and pick up the center of the Coulier camshaft with the scriber so as to transfer that height over against the height of the pitman pin in the long lever. Whatever the difference in the height of these centers, the short rocker lever must be moved the same distance in an opposite direction to bring the center line of the pitman to the camshaft center line. This is the pitman position which must be maintained; therefore, do not attempt to level the pitman by the rollers after the pitman has been balanced, but set the rollers in the usual way.

The reason for having the pitman so carefully balanced is to have exactly half of the Coulier cam action above and the other half below the centralized position of the pitman. In this way, the speed of the slurcams and carriers will be constant and alike in both directions, as is necessary for uniform stitches in knitting. It will be found helpful to mark the central and end positions of the friction rod driving block on the block supporting bar. In case of wear or slippage, these markings will show how much loss of lead has occurred, and where. The Coulier cam and motion bearings are subject to heavy duty, and they must be well lubricated and kept in good repair to prevent irregular motion of the slurcams and carriers. The Coulier cams can be recut once after they become worn, but it must be done skillfully by the machine builders to obtain satisfactory results. Both pitman rollers must be of the same diameter and of the original size in order to have a correct and equalized slurcam motion; therefore, it is best to replace the rollers with new ones when they become worn.

# CIRCULAR MACHINES—Chapter IX (continued). Cams and Picks

By JULIAN W. HUGHES

**POLISHING CAMS.** Although the various cams are tempered to a suitable hardness, they become rough on the face from the impact of the butts. The roughness begins at the point on the face that contacts the butts first, as at *C* on the left-hand stitch cam, Fig. C16 (repeated from April). The left-hand stitch cam is subject to more wear than any other because it is always in use while the machine is knitting; the right-hand stitch cam is subject to less wear than the others, because it is used only during the knitting of the heel and the toe or, on some makes of machines, to make marks in the leg of the hose to imitate full-fashioned hosiery.

Cam faces, to be kept smooth, should be polished at regular intervals. If this is done, it should not be necessary to grind a cam more than once in a lifetime. If a stitch cam is neglected until it starts to give trouble, and is so badly nicked that it bends or breaks the needle butts, there are but two things the fixer can do; he can either replace the nicked cam with a new one, or he can grind off the cam face to a smooth surface.

Replacing a stitch cam which is considerably worn often involves extra work, such as readjusting the center rise cam or the side cam, and also readjusting the sinkers to get the correct stitch.

In view of the customary desire to save parts by reworking the cam, the natural tendency, when the cam face is too rough to polish, is to grind it smooth.

It is possible to grind a cam so that it will continue to give good service, but some authorities, including the writer, are generally opposed to the practice. If cams are neglected so long that they cannot be polished smooth by buffing, it is better, as a rule, to use a new one. Sometimes, however, a fixer takes over a section of machines on which a number of left-hand stitch cams have passed the polishing stage, and by knowing how to grind cams correctly, he can save his employer money.

When cams are ground, they must be ground lightly so that heat will not affect the hardness of the metal. The pitch and contour of the face must be finished to conform exactly with the original cam. In this connection, it is a good idea to keep for a pattern a new cam, just as it came from the machine builders. A grinding wheel of fine grit, 4 in. in diameter, is perhaps the best for hollow-grinding stitch cams and, of course, the buffing wheel should be the same diameter.

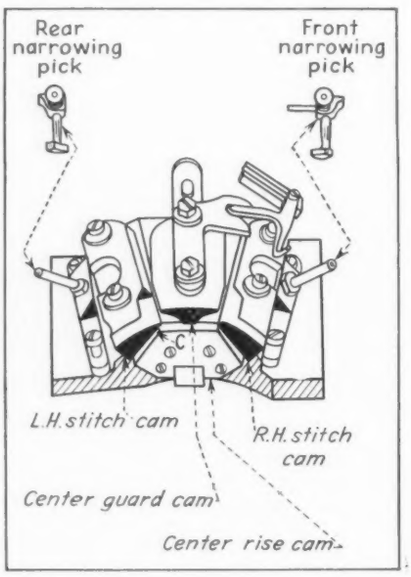



Fig. C16. Stitch cams and main cam block

**ADJUSTING PICKS.** During the knitting of the heel and toe, the narrowing picks are in operation while the first half of the pocket is being knitted. The needle butts slide alternately over the top of the right-hand and left-hand stitch cams. As they slide over these cams, they are arrested in a recess of the pick and are cammed up out of knitting action. The widening picks located on the opposite side of the cylinder (see Fig. C15, April, 1941, page 76) arrest needles in the same manner, but in reverse order, alternately lowering needles into knitting action on reciprocal strokes of the cylinder.

It can readily be seen that, since the needles move with the cylinder while the picks are stationary, the contacting of the needle butts puts considerable strain and induces rapid wear on the picks. The picks must be kept moving freely and must be accurately set at such an angle that the lips on the picks will be met squarely and accurately. The recesses at the points of contact must be free from burrs in order to engage the needles accurately. The springs on the picks should be replaced when they become weak and permit sluggish movement of the picks.

The picks themselves must be kept free of gummed oil or lint; otherwise their movement may be retarded and they may bend or break the needle butts. Defective picks will cause trouble if neglected. Fortunately, they are in action only a fraction of the time during which the machine is knitting.

# TEXTILE EQUIPMENT NEWS

## Developments Exhibited at Philadelphia Show

FOLLOWING are descriptions of several types of new equipment displayed last month at the Knitting Arts Exhibition in Philadelphia:

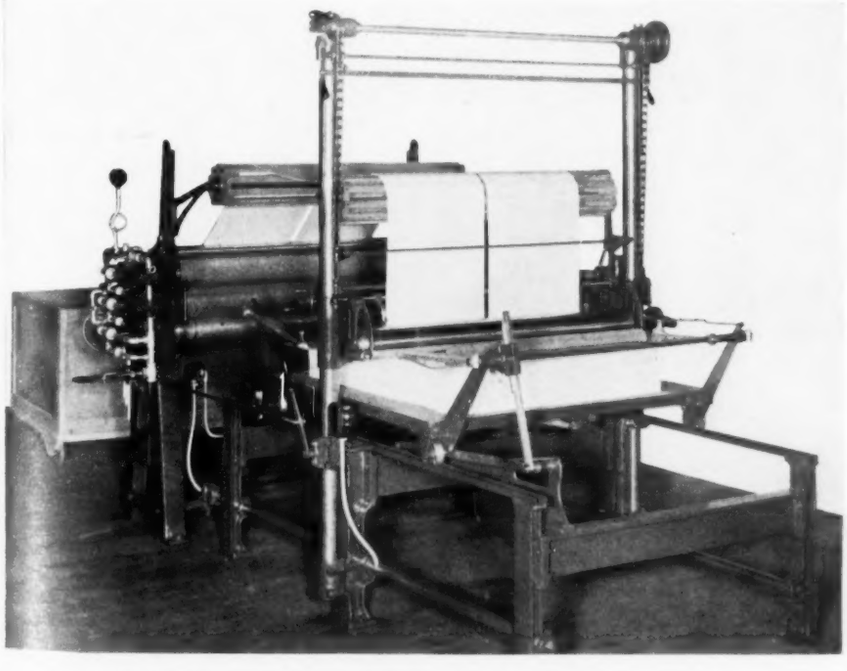
### Calender and Folder

For finishing rib- and flat-knit fabrics Grand Rapids Textile Machinery Co., Grand Rapids, Mich., introduced a new Universal calendar and folder. The new machine is designed to: reduce shrinkage by processing the goods without applying tension at any point and by forming a folded package in which there is no tension; make even widths by thorough steaming from top and bottom and by spreading the fabric twice; and reduce processing cost and investment by processing two pieces simultaneously, which increases the machine speed of 30 yd. per min. to a production speed of 60 yd. per min.

A feature of the machine is that the pressure of the calender rolls and the folder rolls is adjustable. The machine is equipped with a special double steam box which steams from the top, as well as the bottom, so as to saturate with steam, heavy fabrics such as sweater coat, bathing suit, and cotton sweatshirt fabrics. The bottom of the steam box is made up of four tubes so as to afford a large volume of steam. The tubes are designed so as to allow the steam to pass under high pressure without spitting water. The two sections directing the steam toward each other insure thorough penetration even for heavy goods.

The fabric is steamed as it passes over the calender spreader. The spreader guides are driven rubber disks and have a separate change-speed gear box with a control, so they can be driven at three different speeds. The purpose of these driven disks is to overcome the friction of the goods on the spreader by feeding it along on the edge. After a thorough steaming, the cloth passes between three steam-heated calender rolls approximately 4½ in. in diameter and then proceeds to the folding unit. In the folding unit the cloth is spread for the second time then folded without tension. The cloth is folded out by means of a table which travels back and forth under the folder rolls. As the table reaches the end of its travel in each direction, the folder rolls tip so as to make a perfect crease, without a wrinkle in it. The rolls raise automatically, governed by the thickness of the goods. Each fold is patted down gently by a flapper board so as to make a correct package. The folder rolls lay the goods down loosely without any tension.

The folder drive column has a change-speed gear box and control, with three speeds, so that all tension between the two units is eliminated.



Calender and folder for knitted fabrics (Grand Rapids)

Multiple-feed sinker-top machine (Tompkins)

### Multiple-Feed Sinker-Top Machine

Introduced by Tompkins Bros. Co., Syracuse, N. Y., was a new multiple-feed sinker-top machine, in which the sinker ring and sinker cam ring have been eliminated, allowing a clear vision of the operation of the needles and sinkers. The sinkers are automatically adjusted to the length of stitch desired. The new machine, known as Model B-15, has a cylinder with inserted wall. It is an exceptionally simple machine to operate, the cam ring being removed by taking out two screws. All cams are

on this section for operating both needles and sinkers. The needles and sinkers are not disturbed by removing the cam ring. This machine has a new type of take up and is equipped with electric drive and automatic stop motion. The number of feeds depends on the size of the machine.

Another knitting machine introduced by Tompkins Bros. Co. was the improved Model S-1 single-head spring-needle machine. This machine is especially designed for overcoating materials, but can be employed for knitting fabric that can be knit on the older-type spring-needle table. The Model S-1 is electrically driven by a V-belt simplified motor drive. Recent improvements include an electrical yarn stop-motion and needle stop-motion. All standard burs are used on this machine. Production on overcoating materials is approximately 100 yd. per 8-hr. day, using six feeds.

## Nylon Sizing Machine

For sizing thrown Nylon yarns previous to further processing, Universal Winding Co., Providence, R. I., has developed a 12-spindle Nylon sizing machine incorporating a pineapple cone attachment and an oscillating traverse control. A heart-shaped cam controls the thread guides for all 12 spindles, alternately lengthening and shortening the traverse on the packages to build tubes with tapered selvages. This build, it is said, eliminates the necessity for redrawing and permits coning directly from the sizing tube.

The sizing attachment is made of stainless steel throughout, and the parts are designed for easy cleaning. The sizing roll revolves and traverses at very low speeds; yarn guides can be quickly removed and replaced.

The chuck which grips the sizing tube is of the expanding type and can be collapsed and expanded by a lever attached to the starting handle, which is said to facilitate doffing and loading and to reduce operator fatigue

Provision is made for winding two ends on a tube when winding from small packages. To dry the double amount of yarn on the tubes, strip heaters mounted in removable hoods are available The sizing machines can be lined up in rows and connected to a central circulating system.

## For Removing Half Stitches

A new looper attachment for removing half stitches after trimming of coarse-gage work was a feature of one of the looping machines exhibited by Southern Textile Machinery Co., Paducah, Ky. Circular "brushes" made of soft rubber and having coarse, cut-out "bristles" are substituted for brushes made of more conventional materials, and remove the heavy half stitches without difficulty. The new device is now standard equipment on loopers of nine points and coarser.

## Hosiery Seamer

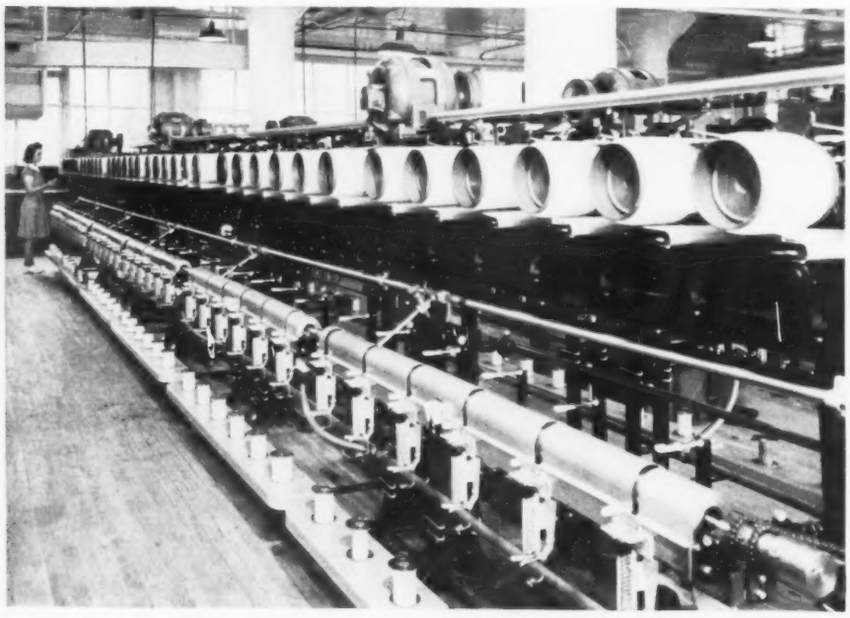
Especially designed to produce seams of good quality on the most delicate Nylon and silk hosiery, as well as on wool, cotton, and lisle, the 242-1 seamer developed by Singer Sewing Machine Co., 149 Broadway, New York, is said to be limited in speed only by the operator's ability to guide the work. An extremely narrow machine head is designed to give the operator a clearer view of the guides and feed cups. A light built into the sewing head directly over the stitching instruments is said to prevent eyestrain when threading the machine and when guiding selvages.

A balanced motion, with fewer moving parts, forms a simplified mechanism which avoids vibration and gives quiet action at all speeds, it is stated. Automatic lubrication of all important bearings is designed to save operator's time, to avoid oil stains, and to reduce wear.

The new machines can be equipped for operation with individual tables and V-belt drives, which increases mobility of units and gives independent equipment to each operator.

The same company showed two improved machines. One a feed-off-the-arm machine, is now available with a very small arm, said to make possible its use on arms of even the smallest boys' shirts, nurses' uniforms, etc. The other machine, for single-needle lock-stitching, has been improved by addition of a longer arm which makes possible its use on heavy- and medium-weight materials.

Hosiery seamer (Singer)

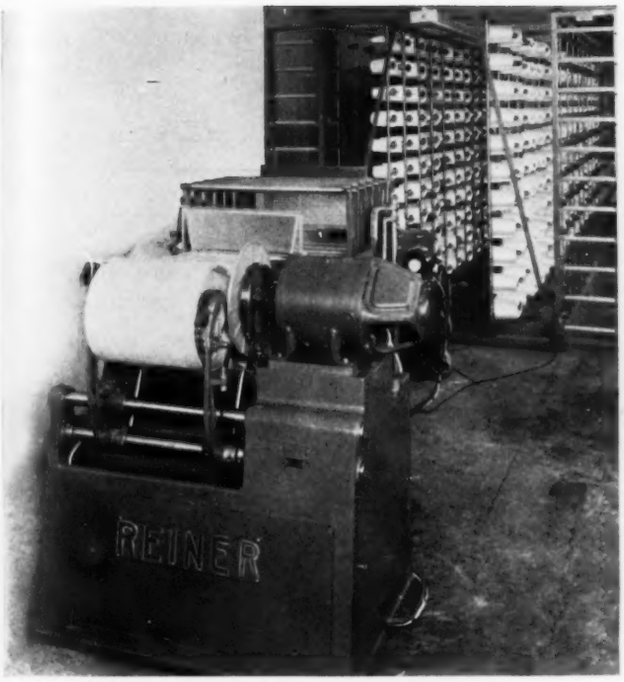


Nylon sizing machine (Universal)

## Beamers

Robert Reiner, Inc., Weehawken, N. J., has developed two new direct-drive beamers that achieve speeds up to 1,000 yd per min. One is a section beamer, the other is a beam warper. Both utilize electrical speed control which permits stepless adjustment throughout the entire speed range; constant yarn speeds are maintained through the movement of felt-covered press rolls which are free to swing out of the way when ends are tied in.

On the section beamer, a connection




Section beamer (Reiner)

Accelerated fading unit (National Carbon)

between the press roll and the reed stand results in the reed rising as the beam fills, maintaining a horizontal yarn sheet between reed and beam and preventing the increased chafing that results from the yarn rising to the top of the dents. Behind the reed, an automatic yarn take-up device keeps the warp taut when the beam is backed up to tie in broken ends. Provision is made for tying off extra ends when changing to narrower beams, eliminating the necessity for rereeding the warp.

The beam warper is designed to permit use of wood, light metal, or perforated metal beams with heads up to 30 in. in diameter, and can be furnished in sizes to accommodate any commercial length beam. A slow starting speed, independent of warping speed, reduces strain on the yarn. Powerful brakes are designed to stop the beam, the press roll, and the measuring roll simultaneously; the brakes release after the halt so that the beam can be turned by hand in either direction.

Both machines are equipped with ball bearings on all fast-running shafts, automatic yard-counter stop-motions, and centrally located speed indicators.

## Accelerated Fading Unit

For comparing the color fastness of dyes, dyed textiles, and other products, National Carbon Co., Inc., Cleveland, Ohio, has introduced the National Type XV accelerated fading unit. The new unit is designed to duplicate the fading effects produced by exposure to natural sunlight, to accelerate fading action, to control test conditions and permit their reproduction at any time, and to operate continuously for a 24-hr. period without attention. The unit is 55¾ in. high and occupies an overall floor space 53 x 30 in. Test samples are supported on a revolving rack within an inclosing drum. The rack carries 18 specially designed sample holders and is driven by a motor mounted outside the drum. A carbon arc, located at the center of the drum, supplies radiation of uniform quality and intensity at the surface of the test samples. A humidifier permits conditions of high relative humidity to be maintained. Turning one toggle switch on the front of the control cabinet starts all the operating elements of the unit. Turning the toggle switch to "Off" shuts down the complete unit.

Although three pairs of carbons are used, the arc burns between only one pair at a given time. As these are consumed, another pair is brought into contact and the arc then shifts to that pair. In this manner the time of operation without attention is made three times as long as it would be were only one pair of carbons used. An automatic arc control, housed in the control cabinet, brings the carbons together, separates them to correct arc length after the current has been established, and maintains that arc length during operation by means of a pinion and racks.

Artificial radiation closely approaching that of sunlight is obtained by using National Sunshine carbons at the arc. A cylinder of Corex D glass inclosing the arc filters out most wave lengths not present in natural sunlight and thus aids in obtaining close approximation to natural conditions.

Optional accessories are available which permit the unit to be employed for testing samples for resistance to outdoor weathering.

## Hosiery Inspecting System

Introduced by Edward R. Ammon, Inc., Reading, Pa., was a new system for handling hosiery between the operations of seaming and dyeing. It is stated that by installing and operating this system, inspecting costs can be cut up to 50%. The system comprises several pieces of equipment, some new and some adapted from former models.

First of the new devices is a canvas-covered rack known as a tie eliminator, and shown at extreme right is the accompanying photograph. One end of the rack is open; at the other end are two copper plates, one of which can be raised and lowered. A wire attached to the metal is grounded at some nearby point. The seamer, as she finishes each stocking, places it in the tie eliminator. Contact with the copper plate carries off any static electricity which may be present, as in the case of Nylon hosiery, and permits the stockings to pile up evenly. Three dozen stockings are placed in this rack, after which the pile is compressed by pushing the upper plate down. A wide elastic band is next slipped around the bundle, obviating tying of the bundle with a string or tape, reducing amount of handling, and minimizing possibility of snags.

The bundles of stockings are placed

Hosiery inspecting system (Ammon)

in a magazine shown at the left of the inspecting form and the elastic bands removed. A strip of canvas which lies lightly on the pile of stockings has the effect of preventing more than one pulling out of the magazine at a time.

In the inspecting machine, as the operative pulls the stocking on the form, she sees the entire front of the stocking in a long, narrow mirror. Two adjacent mirrors function to reflect light on to the front of the stocking so that the portion viewed in the mirror is lighted to approximately the same intensity as that illuminated directly. This is said to prevent operative eyestrain.

As the operative finishes drawing the stocking on to the form and examining its front, her hand automatically touches a lever which turns the form slightly and expands it for examination of the back of the stocking. At the same time two magnifying mirrors at the toe end of the machine move into such a position that the operative can see the entire toe, considerably enlarged.

When the operative removes the inspected stocking from the form she passes it to a "netting" device. This removes the stocking from her hand, fluffs it out for even dyeing, drops it into a dye net, and indicates the number of stockings in the net.

Not new, but an integral part of the system, is a rack placed in front of and above the inspecting form, which facilitates handling of defective hose.

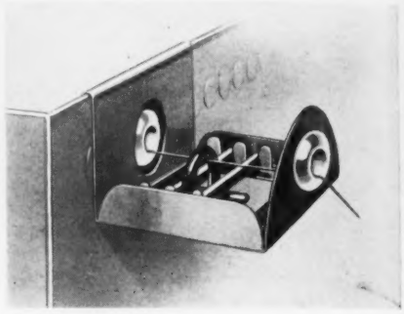
A classification cabinet which is an adjunct to the system is shown at left in the illustration. Its top forms a convenient place for an inspecting room attendant to make out defect tags. The cabinet itself is divided into a number of compartments, in which stockings having various types of defects can be neatly and conveniently stored until a number sufficient for handling has been accumulated.

## Finishing Machine

Recently announced by Ainslie Knitting Machine Co., Inc., 750 Grand St., Brooklyn, a new finishing machine for brushing, napping, pile-raising, and sueding is said to have a number of outstanding advantages. The machine is designed to handle all types of goods from light rayon to heavy wool, and to take all widths up to 60 in. Operation is said to be very simple—to be controlled automatically from the starting lever and two small wheels near the operator's right hand.

Dust drawn off by the exhauster goes into a zipper bag which is easily cleaned; all moving parts are inclosed and out of the operator's reach, yet instantly accessible through large doors. The machine is equipped with heavy-duty ball and oilless bearings throughout, individual motor drive, a self-contained dust exhauster, and a safety bar in front of the feed rolls.

The brush is sharpened by revolving in reverse direction; brushing is controlled through adjustment of speeds and feeds.

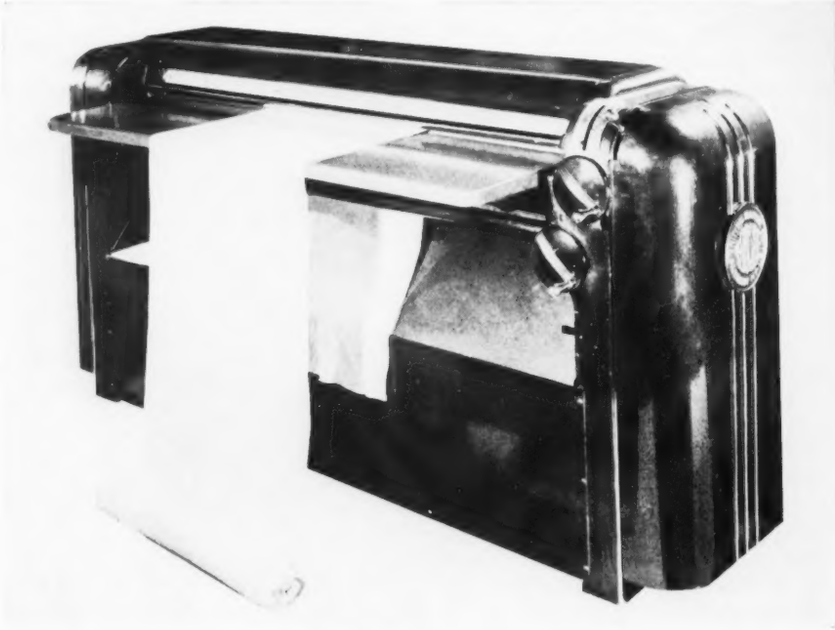


Snarl eliminator (Amon)

## Snarl Eliminator

To prevent snarling of yarn used in knitting crepe-de-chine, Nylon, and silk hosiery during the time between when the yarn leaves the conditioning cabinet and when it passes through the moistening trough, Joseph Amon, Inc., Rahway, N. J., introduced a snarl eliminator. The device consists essentially of a porcelain eye and a tension ring having free movement up and down for a space of about ½ in.

This device is attached to the back of



Finishing machine (Ainslie)

# John P. Maguire & Company

INCORPORATED

## Factors

**Check credits, assume credit losses, and advance in cash, the net value of shipments as made.**

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**ASHLAND 4-4141**

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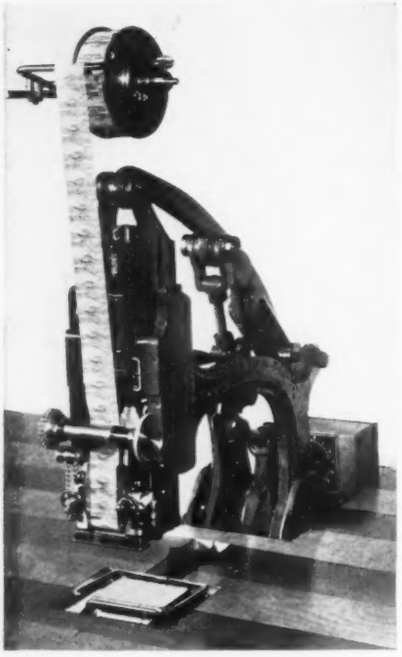
**Southern Representative**
**TAYLOR R. DURHAM**
**Liberty Life Building**
**Charlotte, N. C.**

a glass-float type conditioning trough. Yarn is passed through the eye of the snarl eliminator, under the tension ring, and then goes into the trough. As long as the yarn is held taut, the tension ring is held up. However, then the yarn's forward movement is interrupted, the ring drops to its lowest position. This takes up any slack which might develop, and eliminates possibility of the yarn snarling and thus producing a defect.

## Label Applying Machine

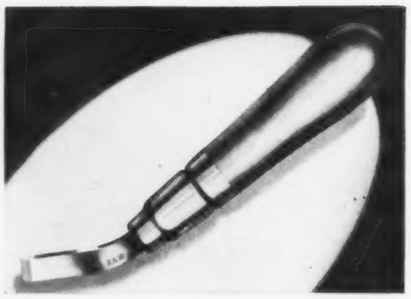
For permanently attaching woven or printed labels to garments by means of thermoplastic resins, Herst Sales Co., 79 Madison Ave., New York, introduced a machine which cuts and applies the labels in a single operation. The machine consists of a magazine holding a roll of uncut labels, a movable cutting and pressing head, a plate by means of which heat is applied, and a clocklike controller for regulating period of dwell.



Label applying machine (Herst Sales)

Approximate production by an experienced operative on average fabric is said to be 350 doz. per day. This, however, includes time-out allowances, since the machine has a theoretical maximum production of 480 doz. per day.

The same company introduced an improved machine which cuts labels from a roll, folds and presses both ends, and stacks the labels in a container. It can also be adjusted to fold labels in loop form, or to fold the ends on the bias, so they can be used as hangers. This machine is said to handle 2,000 or more labels per hour.



Bent loose-coarser (Royersford)

## Bent Loose-Coarser

Introduced by Royersford Needle Works, Inc., Royersford, Pa., was a bent loose-coarser for Nylon hosiery. A feature is the curve which has been given to the steel blade. It is stated that once hosiery has been creased with this device the stitches stay spread, so that stockings can be left for hours or even overnight without fear of the stitches coming together.

## For Winding Nylon Yarn

Bobbins and bobbin caps for use in winding Nylon yarns, made of laminated phenolic material, were introduced by Spaulding Fibre Co., Tonawanda, N. Y. The large tubular bobbins used in winding and sizing feature high strength necessary to withstand stresses caused by contraction of the tightly wrapped yarn, accurately and closely controlled inside diameters and wall thicknesses, and proper balance for high-speed operation. In addition, possibility of discoloring the yarn as a result of corrosion or adherence of particles from the bobbin to the yarn is said to be eliminated, since the material is noncorrosive and proof against adhesion of small particles.

The bobbin caps, which are placed on spools during coning to make certain the yarn will pull off smoothly without rubbing and possibility of breakage, are machined from sheet Bakelite. Edge surfaces are carefully smoothed and rounded to minimize pull on the yarn and prevent damage which might result if yarn were pulled over rough spots.

## Useful Accessories for Textile Mills

**A MANUAL CROSS-TIE MACHINE** for tying with cotton twine packages, bundles, and boxes was introduced by B. H. Bunn Co., Vincennes Ave. at 76th St., Chicago. The machine is built in a number of sizes and models, to meet the needs of various products. The machine will tie in both directions and with a cross of the twine, tying but one knot, and making different multiples of wraps; it can also be used for one-way tying. Simplicity of operation and wide adaptability are features stressed by the manufacturers.

**AN INDUSTRIAL FLOOR-MAINTENANCE MACHINE,** featuring high production and known as Model K, is being introduced by G. H. Tennant Co., Minneapolis, Minn. The machine is said to have a capacity of four times that of the next smaller model, and to make possible more widespread cleaning of both old and new floors without use of water or strong detergents. Low-cost operation, preservation of the wood, and increased light reflection are among advantages cited.

## Other Equipment at Philadelphia Show

Following is a list of new equipment displayed at the Knitting Arts Exhibition, which has been described in Textile World during the last year. Dates indicate issues in which descriptions appeared.

Magnesium-alloy bobbins, Lestershire Spool & Mfg. Co., Johnson City, N. Y. (July, 1940)

Thread-ratio control for hosiery seamers, Union Special Machine Co., 400 N. Franklin St., Chicago. (November, 1940)

Automatic bobbin winder, Whitin Machine Works, Whitinsville, Mass. (November, 1940)

Automatic knitting-cone winder, Abbott Machine Co., Wilton, N. H. (December, 1940)

Automatic bobbin winder, Universal Winding Co., Providence, R. I. (January, 1941)

Automatically-lubricated lockstitch sewing machine, Willcox & Gibbs Sewing Machine Co., 214 W. 39th St., New York (March, 1941)

Label-printing machines, Dennison Mfg. Co., Framingham, Mass. (April, 1941)

Adjustable-speed a.c. drive, Westinghouse Electric & Mfg. Co., E. Pittsburgh, Pa. (April, 1941)

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## For Roving, Not Drawing, Frames

On page 100 of the April issue of TEXTILE WORLD, an item describing the Type AT interlocking metallic roll announced by Saco-Lowell Shops stated erroneously that the rolls are for use on drawing frames. Actually, the new top roll is designed for use on Saco-Lowell "J" and "D" type roving frames.

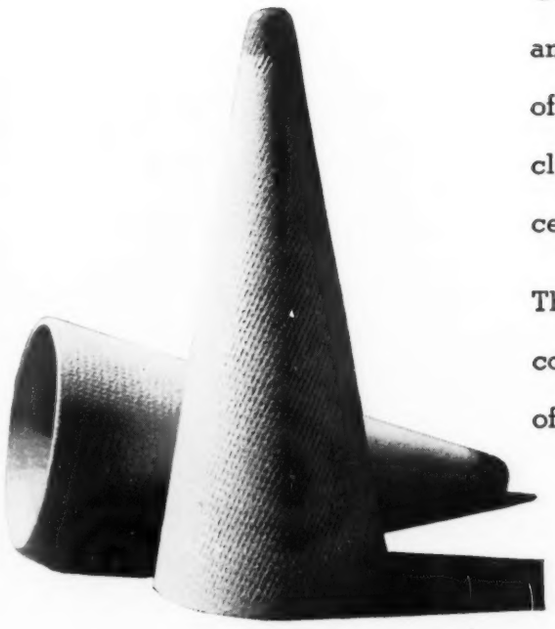
# ALL OUT

Sonoco is all out to meet demands of both business and government.

Normal business should function as smoothly as possible during these unprecedented days, in order that our national economy remains fundamentally stabilized.

Our National Defense Program is an *all out* program—the meaning of which becomes increasingly clear—the effects of which concerns *everyone.*

The Textile Industry is vital to our country—Sonoco is a vital source of supply to textile manufacturing.



SONOCO MAKES *EVERYTHING* IN *PAPER CARRIERS*

## SONOCO PRODUCTS COMPANY

BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.

DEPENDABLE SOURCE OF SUPPLY

# New Chemicals

## Bases for Pigment Printing

Two bases for use in preparing pastes employed in pigment printing have been announced recently by Arnold, Hoffman & Co., Providence, R. I. These new materials, known as Ahcoprint G and Ahcoprint F, are designed to simplify the pigment printing process and to eliminate some of the difficulties previously encountered. Both compounds are sold in the form of light yellow liquids approximately the consistency of molasses. Both give identical printing results and are similar in their use.

The printing pastes are made by stirring cold water into one of the bases and then mixing in the pigment pastes available from various manufacturers. No cooking of the paste is necessary. It is stated that the pastes can be kept for long periods, as they will not putrefy or sour on storage. The pastes are said to be free from grit, to have practically no effect on rubber, and to give no trouble from breaking down on the rolls. After printing, the cloth must be thoroughly dried; but ageing is unnecessary. Among other advantages cited for Ahcoprints are that they result in sharp, clear prints, having excellent fastness to washing and very good resistance to crocking; also, that the fabric is not stiffened.

## Finishing Compound for Wool Goods

Development of a Impregnole PW, a new compound for use in finishing wool goods, has been announced by Impregnole Corp., 580 Fifth Ave., New York. This compound is applied in the last wet-finishing operation to produce a water-repellent, abrasive-resistant finish. The increased resistance to abrasion is due to the fact that Impregnole PW acts as a fiber lubricant, thus protecting the fibers against abrasive action. The shower-proof or water-repellent properties imparted to the fabric also make it more resistant to wrinkling, due to its imperviousness to moisture. Wool goods treated by the new process can carry the registered trade name Weather-Sealed.

# New Publications

## A British Mill Family Weathers the Yesteryears

THE CROWTHERS OF BANKDAM, by Thomas Armstrong; Macmillan Co., New York; $2.75.

Peppered with the spice of Yorkshire speech and custom, here is the story of three generations of Crowthers, an individualistic family who presided over "the deafening looms of Bankdam mills." In three parts, it tells of the ebb and flow of a British wool fortune that rises in the Crimean War to survive the Russian Revolution, the World War, early challenges of labor, the vicissitudes of the wool market and many other problems familiar to our own American millmen today.

Mr. Armstrong leaves no dramatic stone unturned in telling of the lives of two feuding branches of the Crowther family. One—sincere, hard-working and hard-loving—consistently strives to build the mills while the social and political ambitions of the other all but bring about their destruction.

Fascinating in descriptive detail and bounding with emotional appeal, it is a story of people—their motives, modes of living and experiences! The reader is given a motion-picture view, through scene after scene, of historical, economic, political and social influences on the life of this family during the latter half of the 19th century and the first quarter of the 20th.

## Old Slater Mill Setting for Novel

MILL STREAM; by Hortense Lion; Houghton Mifflin Co., 2 Park St., Boston; $2.50

Among recent novels with a textile mill setting is this one telling the story of the first successful cotton mill in this country. Fact and fiction are skillfully interwoven to dramatize the history of what is now known as the "Old Slater Mill," in Pawtucket, R. I. The book recounts the early mechanical difficulties which had to be overcome, the opposition to the new venture on the part of the ship owners of Providence, the efforts of the English to prevent cotton manufacturing in this country by flooding the market with cotton goods, the rapid expansion of the textile industry in Rhode Island during the War of 1812, and final assurance of success which followed the imposition of a high tariff on textile products. Somewhat more emphasis on the activities of Samuel Slater and somewhat less on those of Bradley Taylor, the central fictitious character, would have added to the historical accuracy of the narrative. As a novel, however, the book is most entertaining, and to textile mill men particularly it will be of outstanding interest.

## History of American Dye Industry

DYES MADE IN AMERICA; Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J.; for limited distribution.

This beautifully illustrated book, prepared by Calco Chemical Division in conjunction with the celebration of its 25th anniversary, traces the development of the American dye industry from its early beginnings to the present time, with particular reference to the growth of the Calco organization. The text, written by William Haynes, describes the organization of Calco Chemical Co., and how the company succeeded by painstaking experiments to make aniline oil, beta naphthol, and finally such dyes as methylene blue, crimson, and tart razine. It then comments on the activities of the company after our entry into the World War in manufacture of chrome dyes and explosives. Next the book tells of the work of the late Francis P. Garvan, World War Alien Property Custodian, in helping to break the hold of the German dye cartel and in guiding the post-war growth of America's new chemical industry. Finally it outlines the post-war developments in the dye industry and Calco's part in making available the wide range of synthetic colors now produced in this country.

## Valuation of the Cotton Planters

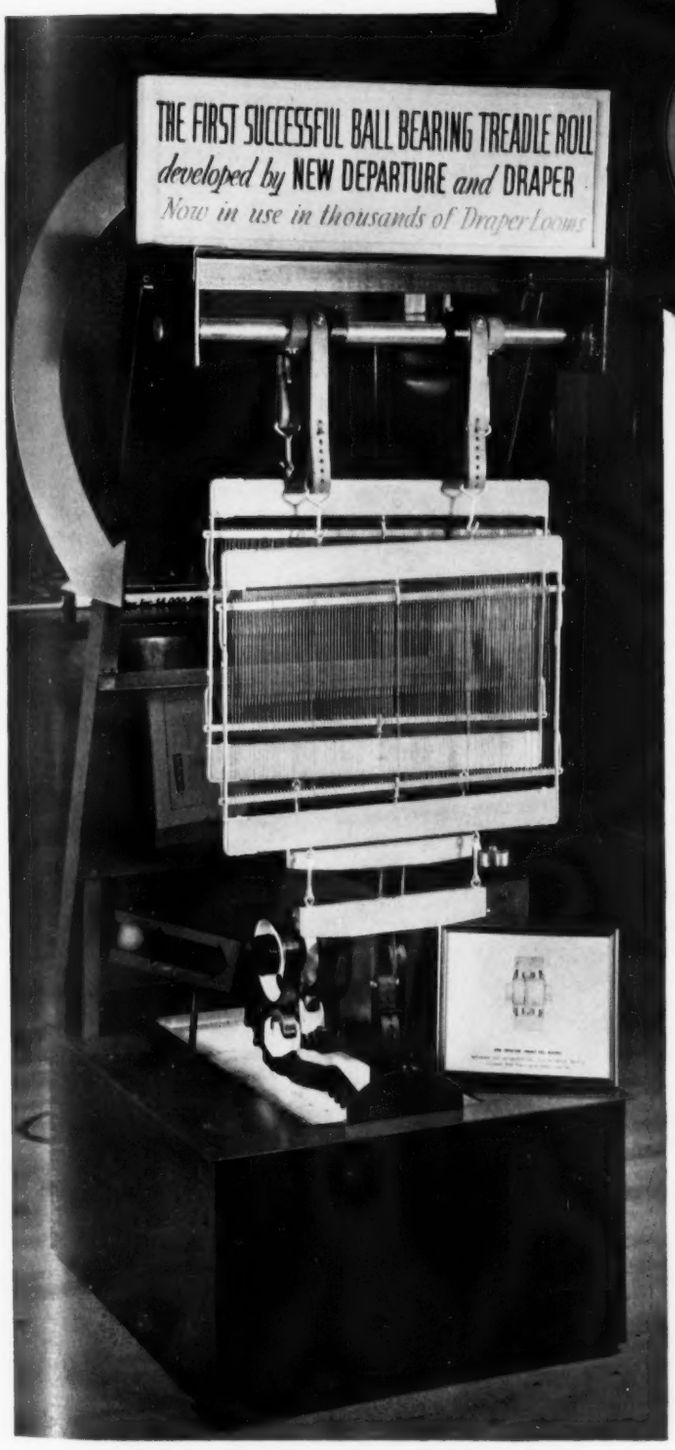
THE USURPER, by Harry Harrison Kroll; The Bobbs-Merrill Co., Indianapolis, Ind.; $2.50.

In this gripping story, Author Kroll shows what can happen in that last stronghold of aristocracy, the cotton-planting South, when an ambitious white-trasher decides to make a name and place for himself. His theme is a strong one, and his characterizations are perfect. He sets forth accurately the typical good and bad points of the peckerwood and the cotton-planter classes.

The vengeful attitude of the tenant-type is exemplified in one way by the murder of Jake Schweller, the tool of the big planters, by young Help Reagan who was willing to be a martyr to show them up; and in another way by Stan Butterworth's efforts to get even with the socialites through his financial success and their business downfall. On

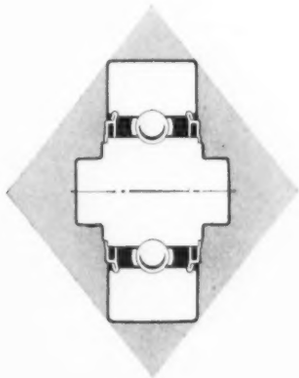
# THE HIT OF THE SHOW!

*Below: Animated display of parts of a Draper Loom shown at the New Departure exhibit at Southern Textile Exposition, Greenville, S.C. Note treadle roll bearing. A focal point of lively interest.*


THE FIRST SUCCESSFUL BALL BEARING TREADLE ROLL
developed by NEW DEPARTURE and DRAPER
Now in use in thousands of Draper Looms

Hundreds of practical mill men expressed enthusiasm for this first successful anti-friction cam or Treadle Roll Bearing, developed by New Departure and Draper.

Heavily proportioned to absorb shock, self-sealed against lint and lubricated-for-life, it practically eliminates shut-downs for roll replacement—increases cam life and reduces flash fire hazard. Made by New Departure, sold by Draper.



## NEW DEPARTURE

### BALL BEARINGS

3004

the other hand he does not exaggerate the snobbishness of the old-line planters and their wives, coupled with sloppy or unethical business practices and actual embezzlement as they attempt to continue their way of living.

Mr. Kroll has written a powerful novel of a section of our country going through the throes of adjustment resulting from unhealthy cotton economics. It should be particularly interesting to textile manufacturers who spin cotton grown in that Delta.

## To Promote British Cottons and Rayons

BRITISH COTTON AND RAYON TEXTILES: The Cotton Board, Manchester, England.

This is a 150-page book, with 40 pages of color plates showing 200 fabric samples in true colors and nearly 110 other pages showing 400 samples in black and white, dedicated to Britain's export trade in cottons and rayons. The central purpose of the book, says Sir Andrew Duncan (until recently president of the British Board of Trade) in the foreword, is to show to buyers overseas "that these products are still available in splendid variety, and that the opportunities of profitable use of British textiles continue in war time as in peace."

There is ample tonnage for export merchandise shipments, he declares, and if the convoy system involves a rather longer transit period, it carries with it a high degree of safety. "The ship that brought this book also carried cargo in safety to your shores," says the foreword.

The book itself is divided into five sections. The first surveys British rayon and cotton textiles in the piece. The second covers made-up apparel. The third surveys fabrics for interior decoration. The fourth covers cotton and rayon textiles for general household use. The fifth section stresses the scope and versatility of the British cotton and rayon industries, illustrating fashion accessories of one kind or another, and miscellaneous merchandise.

# News of Suppliers

**Parks-Cramer Co.,** Fitchburg, Mass., has purchased the Shirreffs Worsted plant at Fitchburg. The executive offices and the company's northern plant at 970 Main Street, together with sales, engineering and storage facilities, will be transferred to the former worsted mill at once. The new plant offers ample room for expansion. Parks-Cramer Co. dates from 1872, when Parks & Carpenter was established. In 1918, the then-styled G. M. Parks Co. purchased the air-conditioning business of Stuart W. Cramer, of Charlotte, N. Co., and the Parks-Cramer Co. was formed. The southern business is handled from the plant at Charlotte. The Fitchburg plant has been at its old location for 49 years.

**Arnold, Hoffman & Co.,** Providence, R. I., has purchased from the Hercules Powder Co. the latter company's Providence Drysalters Division, located at East Greenwich, R. I., which will be consolidated with the Arnold, Hoffman & Co. manufacturing facilities at Dighton, Mass. The latter concern will now offer a variety of additional products, such as Concental, Mellol, new soluble pine oils and various new rayon oils. Walter R. Bunce, formerly with Hercules Powder Co., is now with Arnold Hoffman.

PARKS-CRAMER CO.'s new Fitchburg location. The company's executive offices and its Fitchburg plant are being moved into these buildings

IRVING H. TAYLOR elected vice-president of Michigan Alkali Co.

**Michigan Alkali Co.,** Wyandotte, Mich., has elected Irving H. Taylor as vice-president in charge of sales. His headquarters will be in New York.

**National Ring Traveler Co.** will be settled in its new plant, 354 Pine St., Pawtucket, R. I., by May 15. Much new equipment has been added, especially in the heat-treating department. The company's long-established address, P.O. Box 1565, Providence, R.I., will be maintained.

**American Rolling Mill Co.,** Middletown, Ohio, reports that 3993 tickets for a prize drawing were signed at its booth at the Southern Textile Exposition last month. The prize winners follow: 1st, Mrs. Riles, 2nd M. S. Chastain, 3rd, Rachel Hallis, 4th, P. O. Denton. All were from Greenville.

**Victor Ring Traveler Co.,** Providence, R. I., has appointed Clarence R. Duncan to its southern staff. He will be attached to the Gastonia office. Mr. Duncan was previously assistant superintendent of Glenn Mfg. Co. and Melville Mills, both of Lincolnton, N. C. Victor Ring Traveler Co.'s house organ, "The Traveler," is marking its 25th anniversary with the April issue. It is the 41st anniversary for the company.

**B. F. Goodrich Co.,** Akron, Ohio, has effected further expansion of facilities for processing products from Koroseal, with the completion of a $300,000 manufacturing plant at Akron. This new plant will initiate production of a new film for packaging materials and for general industrial use, available in a wide range of colors. Raw materials will be supplied from a new plant erected last fall at Niagara Falls, N. Y., and from the company's own chemical manufacturing division located at Akron.

**Steel Heddle Mfg. Co.,** Philadelphia, Pa., has added Walter D. Bates, R.F.D.

"... and we're getting the cream of the full-fashioned hosiery market since we began knitting with T M W Needles."

LEE H. HILL, head of the Transformer Department of Allis-Chalmers Mfg. Co., Milwaukee, Wis., since 1936, who has been appointed assistant manager of the company's Electrical Department. Mr. Hill joined Allis-Chalmers in 1931. He holds more than 40 patents relating to transformers.

No. 1, Woonsocket, R. I., to its New England staff. Mr. Bates, with about 20 years of specialized shuttle experience, will act as shuttle engineer for Southern Shuttle Division of the company in the New England territory, as well as in the Middle Western States. This division was formerly operated by Steel Heddle as Southern Shuttles, Inc., Greenville, S. C. The management remains as heretofore with Louis P. Batson as director of sales and J. J. Kaufman, Jr., as southern manager. Messrs. Batson and Kaufman have been officers of Southern Shuttles, Inc.

**U S Bobbin & Shuttle Co.,** Lawrence, Mass., and Greenville, S. C., has appointed Clarence R. Howe to active service, as vice-president. Mr. Howe is resigning his position as vice-president of T. C. Entwistle Co., Lowell, Mass., ending a 19-year association there. Prior to 1922 Mr. Howe was with Crompton & Knowles Loom Works. He has been a vice-president and a director of U S Bobbin & Shuttle Co., but was not previously active with that company.

**Commercial Solvents Corp.,** Terre Haute, Ind., has added Ralph L. Ericsson to the staff of its Trade Relations Division, Terre Haute, Ind. He will be chiefly concerned with advertising and sales promotion.

**Tolhurst Centrifugal Division,** American Machine & Metals, Inc., has appointed Howard H. Harlan, who has been sales engineer and recently manager of Tolhurst's New York office, as technical assistant to the general sales manager, with offices in Washington, D. C., where he will maintain contact with Federal Government offices. George P. Hebard, formerly advertising manager, U. S. Hoffman Machinery Corp., district manager for Fletcher Works, Inc., and recently sales and advertising manager of G. H. Bishop Co., has been made field sales promotion manager. Branch office changes include appointment of J. R. Angel as manager at New York and W. C. Davis in charge at Atlanta.

**Ashworth Bros., Inc.** are building a new single-story, slow-burning type, repair shop in Atlanta, Ga., on the corner of Forest Ave. and Fulton Drive to be used for rewiring lickerins, reclothing top flats, and for stocking various card-clothing items. Future expansion is provided for by available land and by the construction which will permit the addition of two more stories. The new shop will replace the present repair facilities of the company in Atlanta. Ashworth has plants in Fall River and Worcester, Mass. and Philadelphia, Pa., and repair shops in Fall River, Philadelphia, Charlotte, Greenville, Atlanta, and Dallas.

W. B. TUCKER, who has been named general sales manager of the Industrial Division of Armstrong Cork Co., Lancaster, Pa.

**Westinghouse Electric & Mfg. Co.,** East Pittsburgh Pa., announced at a trade-press preview April 8, in New York, the development of Hipersil, new magnetic material for use in transformer coils. Hipersil is a joint research development of Westinghouse and American Rolling Mills Co. It is said to have a one-third greater flux-carrying capacity than the best conventional silicon steel, and to permit a reduction of as much as 25% in size and weight of transformers.

**Goodyear Tire & Rubber Co.,** Akron, Ohio, announces that Robert E. Lee, who has been superintendent of the company's Plant 2 in Akron, has been named superintendent of the Goodyear factory at Jackson, Mich., while E. D. Sheahan, who has been Jackson superintendent for the last four years, succeeds Mr. Lee in Akron.

**Link-Belt Co.,** Chicago, has appointed Harry L. Strube as chief engineer of the Link-Belt eastern division with headquarters at the company's Philadelphia plant, to succeed F. F. (Ferd) Waechter, who has resigned after 43 years of service. Mr. Strube has been assistant engineer at Philadelphia. Ralph R. Hoffman has been elected a vice-president of Link-Belt in charge of sales.

**Foxboro (Mass.) Co.** is erecting its own building at 5151 Baum Blvd., Pittsburgh, Pa., where servicing department and offices will be located after May 15. A. H. Shafer continues as manager.

**Manhattan Rubber Mfg. Division** of Raybestos-Manhattan, Inc., Passaic, N. J., announces that William H. Dunn, secretary, director and comptroller of that company, has been elected treasurer of the Rubber Manufacturers Association.

**American Cyanamid Co.,** New York, has changed the name of its Beetle Products Division to Plastics Division. C. J. Romieux is sales manager of the division in charge of commercial activities, and Dr. K. E. Ripper, as chief technologist, heads its technical activities.

**Calgon, Inc.,** Pittsburgh, Pa., has opened a branch office at 2512 Book Bldg., Detroit, Mich., with Robert Graf in charge.

**C. G. Sargent's Sons Corp.,** Graniteville, Mass., is now represented by Carolina Specialty Co., Charlotte, N. C., in the States of Alabama, Georgia, Tennessee and Mississippi.

**Manning, Maxwell & Moore, Inc.,** Bridgeport, Conn., has recently added to its sales personnel Herman M. Munson to work in the Chicago district, and Frederick W. Chadwick, who will make his headquarters at Syracuse, N. Y.

THE LATE WILLIAM A. BRIGGS, for many years with Boston Woven Hose & Rubber Co., most recently as southern sales manager at Atlanta, whose passing was recorded in our April issue.

**"Truth needs no flowers of speech"**
POPE

The new READING 30-Section 51-Gauge Full-Fashioned Knitting Machine produces 104 per cent more volume and 156 per cent more value than ordinary 20-section 42-gauge machines . . . . . *And remember: Money invested in modern machinery serves as insurance for your total investment.*

TEXTILE MACHINE WORKS • READING, PA.

# FREE FOR THE ASKING

**Readers interested in literature reviewed on this page may secure copies by writing to Textile World, 330 West 42nd St., New York, giving their company connection, title of item desired, and date of issue in which it was reviewed.**

**An accelerated fading unit** recently introduced for comparing color fastness of dyed fabrics, dyes, paper, plastics, and other products, is the subject of Catalog Section L-6201, issued by National Carbon Co., Inc.

**Wire fence,** its advantages and uses, are the subjects of a bulletin titled "Fence Facts," distributed by Page Fence Association.

**Warp sizing equipment** for rayon yarn is the subject of several short items in the April issue of *Rayon Warp Sizing Specialist*, offered by Charles B. Johnson Machine Works.

**Roof ventilation** by means of new "Power-Flow" roof ventilators, is the subject of a catalog recently issued by the DeBothezat Ventilating Equipment Div., American Machine & Metals, Inc.

**Ammeters and voltmeters** in a.c. and d.c. types for general use are described in a 12-page bulletin, No. 43-414, published by Westinghouse Electric & Mfg. Co.

**A new shear,** said to involve several design improvements and features, is pictured and described in the March issue of *The Clothroom Spotlight*, published by Hermas Machine Co.

**Roller bearings** for textile machinery are the subject of a 16-page bulletin, profusely illustrated, which shows applications on picking, carding, spinning, weaving, finishing, and other types of textile machinery; distributed by Hyatt Bearings Div., General Motors Sales Corp.

**Fan systems** for slasher, dyehouse, and shear exhausts; return-air condensers; stock blowers; etc. are pictured and briefly described in a 6-page folder issued by Knowlton & Newton Co., Inc.

**Elimination of dust,** soot, and smoke particles by use of electromatic air-filtering equipment is described in an illustrated folder offered by American Air Filter Co.

**Multiple V-belt drives** are covered in a 64-page data book which includes information on ratios, load capacities, friction losses, etc.; released by Fort Worth Steel & Machinery Co.

**Oil circuit breakers** for starting motors are described in a 6-page leaflet, including data on maximum current and voltage ratings for the various styles; offered as data sheet 33-220 by Westinghouse Electric & Mfg. Co.

**High-speed rayon** looms of the XD type, built with either dobby or side-spring top, are discussed in a 4-page data sheet prepared by Draper Corp.

**Anhydrous ammonia** is the subject of a booklet covering chemical and physical properties, methods of handling, and other useful information; being distributed by Mathieson Alkali Works.

**Whitin-Schweiter winders** are the subject of a 10-page illustrated bulletin which tells the story of how these machines came to be manufactured by Whitin Machine Works.

**Twisting of silk** and rayon yarns is the subject of the March issue of *Atwood Twists* which compares early and modern machines; published by Atwood Machine Co.

**Textile lubrication** is the subject of the Second 1941 Edition of *The Service Factor*, which includes a chart showing points to be lubricated and recommended lubricants produced by Sinclair Refining Co.

**Fluorescent luminaires** in new 100-watt sizes which are available with four styles of reflector units are the subject of leaflet F-8604 recently announced by Westinghouse Electric & Mfg. Co.

**V-belt drives** in single and multiple types are the subject of Catalog W41, which contains considerable data on drive selection and specifications; offered by American Pulley Co.

**Process oils** for rayon, cotton, and wool; and current sizing problems are among articles of interest to textile mill men in the March-April issue of *The Houghton Line*, issued by E. F. Houghton & Co.

**Speed reducers** in a diversity of types are described and pictured in a 36-page catalog, No. 141, which gives considerable engineering and application data; prepared by Winfield H. Smith, Inc.

**Demineralization of water** for use in dyeing, bleaching, washing, rayon production, and other purposes, and the equipment and chemicals required, are the subjects of Bulletin 1970, prepared by International Filter Co.

**V-belts** are the subject in a revised engineering data book including information on standard drives, horsepower specifications, sheave factors, and other data for designing new or special drives; issued by Manhattan Rubber Mfg. Div., Raybestos-Manhattan, Inc.

**Electrostatic air cleaning** by means of Preciptron equipment is the subject of a 4-page folder illustrated with several textile-mill application pictures, and being distributed by Westinghouse Electric & Mfg. Co.

**Automatic speed control** by hydraulic means is the subject of a 6-page bulletin illustrated with several textile-mill photographs, offered by Reeves Pulley Co.

**Air-operated controllers** in inexpensive, non-indicating, non-recording types applicable to a wide variety of services is the subject of Folder No. 77-2 which contains descriptions of the instrument and suggested applications, as well as numerous illustrations; prepared by Brown Instrument Co.

**Sodium tetraphosphate** is the topic of industrial bulletin No. 64 which describes chemical and physical properties and unique characteristics said to make this product a solution to many industrial problems; offered by Rumford Chemical Works.

**Ticket printing** and attaching machines for a variety of purposes, including labeling of textiles to comply with Wool Labeling Act, is the subject of an illustrated 4-page folder offered by Monarch Marking System Co.

**Industrial chemicals** in a wide variety are the subject of a 41-page book; three sections cover alphabetical listings, listings by industries in which used, and brief technical data on products and their use; offered by American Cyanamid & Chemical Corp.

**Cotton machinery** which is also applicable to spun rayon, rayon, silk, and mixed goods, in cloth rooms, print works, bleacheries, dyeing and finishing plants, rubberizing and coating plants, is the subject of a well-illustrated 48-page catalog, No. 7, just published by Curtis & Marble Machine Co.

**Variable speed** on a wide variety of textile machines is the subject of a 6-page pictorial bulletin No. G-415 which is offered by Reeves Pulley Co.

**Sectional warp beams,** loom beam and warper beam heads are the subjects of two leaflets obtainable from Hubbard Spool Co.

**Lubrication's** part in manufacture of woolen blankets is the subject of a feature article in the April issue of *Esso Oilways*, published by Standard Oil Co.

**Dyeing of wool** for Marine Corps uniforms and blankets is the subject of Technical Bulletin No. 593, recently published by Calco Chemical Div., American Cyanamid Co.

**Stainless-steel equipment** for use in dyeing worsted fabrics is the topic of an article in the April issue of *Electromet Review*, published by Electro Metallurgical Co.

**Interlock knitting machines**, and the fabrics they produce to meet new style demands, are the subjects of a folder illustrated with an actual sample of knitted fabric; distributed by Wildman Mfg. Co.

**Conveyor systems** for handling coal in textile mills, a wide two-roll starch mangle, and the contribution of Eli Whitney to modern mass production, are the subjects of three articles of interest to textile men in the April issue of *Link-Belt News*, published by Link-Belt Co.

**Air-cleaning** of cotton spinning, winding, and warping equipment; production of defense houses made largely of cotton; and automatic handling of materials in cotton mills are three subjects discussed in the April issue of *The Swirling Column*, issued by American MonoRail Co.

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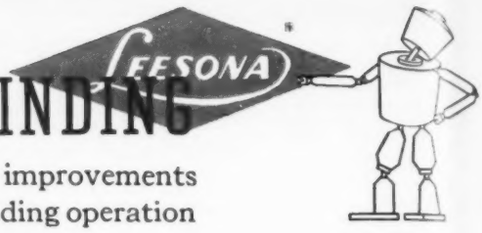
THIS IS NO. 27 OF A SERIES ON

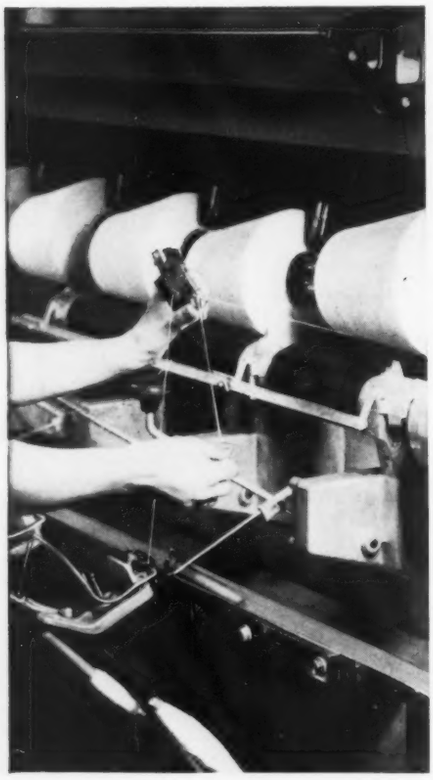
# GETTING THE MOST FROM WINDING




Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

## HOW OPERATORS SHOULD START THE SPINDLE ON A DRUM WINDER (Roto-Coner*)

In changing from a slow-speed to a high-speed machine, mills often encounter new problems of operation. To help our customers get the best results with Roto-Coners,* we offer the following suggestions on how the spindle is to be started. These suggestions are based on the experience of those mills now getting the most satisfactory winding results.



(1) The first step is to remove the empty bobbin and place it on the automatic conveyor. Sometimes, several empty bobbins can be removed at once.

(2) From the supply shelf conveniently located above the winding spindle, the operator picks up a full bobbin and "readies" it for winding. This is done by unwrapping the spiral of yarn from the outside of the bobbin and winding it around the fingers of the right hand. The tail end of yarn at the base is also broken off to prevent tangling with the running end when the bobbin gets small.

(3) The operator places the full bobbin on the supply spindle with her left hand.

(4) At this point, many mills require the operator to run her finger over the face of the Slub Catcher to remove any small accumulation of lint.

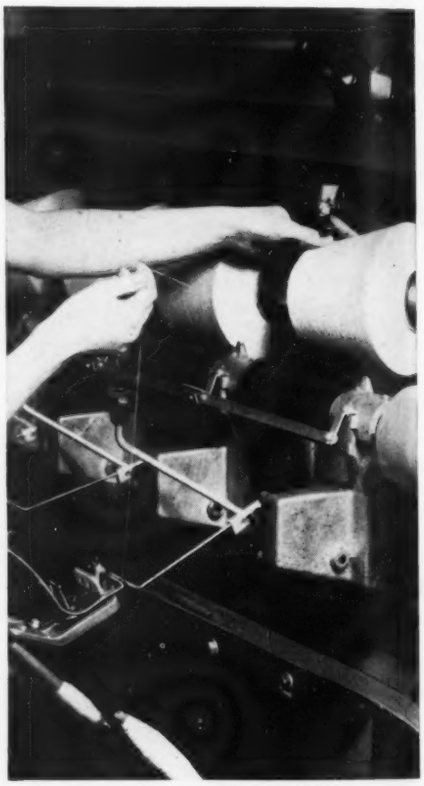
(5) Even though the Slub Catchers are self-threading, many mills consider it safer to have the operator do the "threading-up." It can be done with a flick of her right hand, and it insures that every inch of yarn will be inspected by the Slub Catcher.

(Many imperfections in knitting cones appear near the knots. This is due to the fact that, if the yarn is allowed to thread itself, there may be an instant when it is not between the blades. At 550 yards per minute (about 9 yards per second), several yards may pass without inspection.)

(6) With her right hand, the operator picks up the end on the surface of the cone. Since this end may, by now, have lost some of its twist, she winds a few coils around the fingers of her right hand.

(7) She now puts the two ends in the knot-tyer which is on the back of her left hand, and ties the knot, inspecting it carefully to be sure it is pulled tight and that the tail ends are cut off short.

(8) Holding the yarn in her right hand to prevent kinks from going into the package, she revolves the cone with the fingers of her left hand, and almost with the same motion, touches the starting handle which lowers the cone onto the drum. Since the cone is already in motion, the sudden contact with the fast-revolving drum will not harm the yarn. Then when she realizes the yarn is under tension, she allows it to drop into the groove of the traverse roll.



(9) During these operations, the right hand has collected waste yarn which was removed from the bobbin and cone. This waste should be disposed of frequently, perhaps in her apron pocket. On the Roto-Coner,* the conveyor belt is a convenient means of disposal for it is available at each spindle. Any waste on the conveyor will be carried to the end of the machine and dropped into a waste can.

*See our General Catalog in TEXTILE YEARBOOK*

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# THE OVERSEERS' CORNER

## DISCHARGING A MISFIT

A PETE AND BILL DISCUSSION

The winter had been long and cold but at last spring had arrived in full sway. Even Bill, the chronic grouch, seemed to feel at peace with himself for a change.

That is, he was at peace until Pete walked in with a long face.

"What's the matter, son? Having trouble?" he asked.

"Well, yes and no, Bill. It's that Joe Doaks in my department. He's a complete misfit and I really ought to fire him, but he doesn't do anything bad enough to justify it. He just barely keeps his work up in the plant and it isn't very good, but on the other hand he doesn't seem to make the sort of mistakes to warrant getting rid of him. Even in the village he causes considerable trouble and dissension but he never does anything bad enough to call the police about. Several times I have suggested that he look for another job but he says he's satisfied here. What would you do with a bird like that?"

"That's elemental, Pete. I'd run him off the place. Why worry along with some one who isn't any good and who never will be? Get rid of him before he causes you some real trouble!"

"And have the labor board on my neck the next day? Not me, Bill. Besides, the board would probably order the mill to reinstate him with back pay.

At last spring had arrived . . .

After all, the fellow actually hasn't done anything I can put my finger on."

"If that's the case," Bill said, beginning to get mad at Pete's softness, "why don't you dream up something for him to do wrong? Then you could fire him with a clear conscience."

Pete shrunk back from Bill in horror. "You mean *frame* the man! Why you old scoundrel. You know I wouldn't do a thing like that, and I hope you wouldn't."

"Call it what you want to, but nobody's going to make me keep working a worthless employee when I decide to get rid of him," concluded Bill.

**How can an overseer get rid of a misfit, under present-day conditions.**

# Letters from Readers

## Eliminate Red Tape

**"Overseer Record Keeping"**
**Pete and Bill, March, 1941**

Editor, Overseers' Corner

I was very much interested in the Pete and Bill discussion "Overseer Record Keeping" and want to say that I do not blame Bill for grunting and snorting; entirely too many overseers or supervisors find their desks snowed under with a pile of papers, many of which are worse than worthless and are a mere waste of time to prepare. Modern conditions being what they are all possible red tape should be avoided and the overseer left free to devote his time to more important jobs.

WILL
(*Virginia*)

## Paper Work Essential

**"Overseer Record Keeping"**
**Pete and Bill, March, 1941**

Editor, Overseers' Corner

When an overseer properly arranges paper work he has his finger on the pulse of the activities in his department. The overseer who depends on watching his workers to see whether or not they are working may be sure also that his workers are watching him. Then, too, a worker may be hustling and seem as busy as the proverbial one-armed paperhanger and still not be turning out as much work as another who seems to go about his work in a leisurely manner. Paper work proves the difference.

The first paper work an overseer should do is compile a permanent record of the productive capacity of each of his machines on different classes of work and operation quotas for each operation per hour or per shift. Frequent reference to such data for comparison with

**CONTRIBUTIONS to the letters and practical helps in "The Overseers' Corner" are paid for when published without regard to length. We use letters (not over 200 words) discussing the material on this page or any other pertinent matter whether of mechanical, managerial or just plain human interest. Those who contribute practical helps or kinks which are published (not over 500 words) will be paid additional for an appropriate sketch to illustrate their device. It is not necessary to submit finished drawings. Contributions of greater than specified length may be given consideration as articles. If these pages interest you —contribute something to them to interest others. Address Editor, Overseers' Corner, Textile World, 330 West 42nd St., New York.**

$25 FOR AN IDEA—J. N. Vestal (right), an employee in Mill No. 1, Bibb Mfg. Co., Macon, Ga., is shown here receiving a check for $25 from Lawrence R. Brumby, general superintendent, for submitting an idea to the company which has proved valuable in manufacturing operations. The check was presented on a Saturday morning in the presence of many of Mr. Vestal's fellow workers, some of whom can be seen in the background. The Bibb" credits much of its success to ideas from both workers and supervisors which always are welcomed by the management. (Photo courtesy of *Bibb Recorder*).

daily production records soon impresses it upon the overseer's memory without cluttering. Production records will show variations, and if the variations seem too great an investigation will show whether the cause is machine failure, operative failure or condition of material. Without paper work the overseer sometimes misses an unusual variation that allows a situation to pile up and causes a much more severe headache than paper work ever caused. Repair-cost records and records of idle machine time due to repairs make excellent items to compare with the cost of new machines.

J. F. CAHILL
*(Atlanta, Ga.)*

## Let Overseer Settle Grievances

Editor, Overseers' Corner:

Wherever we find men and women working, we find different types of people. Some of them are easy to work with because they realize the meaning of cooperation. We find now and then an individual who is the kind that steps on the other person's toes. In simple words, he tries to run everybody's job, which is bound to bring contention.

To say that this kind of a person is not a good worker would not be fair, for often after a few tactful words from the overseer the problem can be solved, and everything runs smoothly again.

For example, let's visualize a weaver who thinks the battery hand full of faults; the smash hand needs more coaching and the loom fixer is a dope. Well, he is in a stew and so is everybody else on his job. They have reached the point where they think what's the use of trying to please that guy. The truth is, he has nagged so much that they have ceased trying to please him.

Because he thinks he isn't getting a fair deal, he goes to the overseer who talks to him tactfully—and tells him when he finds something really wrong to come to him and to leave the hands alone. From then on, it's hard for him to find something worth taking to the boss. His eyes are now open, and he sees the littleness and the unimportance of the things he once thought were a mountain. Those working with him feel much more at ease and naturally serve him better because the trouble has been erased.

So many little problems that cause friction in our day's work can equally be answered if we would take them to the right person, the overseer, because he has been along the same path and can help you over the rough places and make your working hours a pleasure.

M. B. PITTENGER
*Alexander City, Ala.*

## System and Attention to Duty

**"Superstitions and Shutdowns"**
**Pete & Bill, Dec., 1940**

Editor, Overseers' Corner:

The Pete and Bill discussion entitled "Superstitions and Shutdowns" was amusing and thought-provoking. I can sympathize with Bill in this case because I have started the day by knocking over my shaving mirror and breaking it and found it to be followed by a bad day at the mill. However, a post-analysis usually revealed that my breaking the mirror, as well as my bad day at the mill, was due to a lack of system in my routine duties, or my mind was not on the work I was doing.

The question, "How far should a department go in maintenance?" is very timely and one we should give more thought to. While I do not pretend to be an economist or maintenance engineer, by way of suggestion I would say:

The average period of usefulness for textile machinery considering mechanical depreciation and obsolescence is ten years. Assuming the machinery is new and free of mechanical flaws when installed, and allowing for replacements due to normal wear exclusive of lubrication costs and maintenance labor, the machinery will require little cost for upkeep the first year. My idea would be to allow 2% of the original cost of machine for replacements and new attachments the first year, 4% the second year, 6% the third and so on in this proportion until it reaches 20% the tenth year when the machine should be junked, for even if it is still in good mechanical condition it will likely be obsolete by virtue of new inventions.

JULIAN W. HUGHES
*Burlington, N. C.*

## THE MASTER WORKER

"IN PHILADELPHIA it was advertised that a great musician would play a violin that cost $5,000. The house was filled long before the time for him to begin playing. Finally, the musician came in and drew his bow across the violin, and the audience was spellbound for many minutes. When he stopped playing and the crowd cheered he turned around and smashed the violin over a nearby table. The crowd suddenly stopped applauding and almost held their breath. Then the musician said, 'Now, I will play on the $5,000 violin.' And he produced it from a case nearby.

The moral I see in this story is that it was not the violin he had to play on but that the instrument was in the hands of a master worker.

"The farmer who can grow more and better corn, a better grade of cotton or even large potatoes, is a master workman. In our own organization the girl who can run more sides with more ease and without exerting herself, the speeder hand who can make the highest quality of work, the twister hand or the winder hand who can finish up high-flex cord superior to anyone else, is just as much of a master worker as anyone else. Let's each of us try to become a master worker no matter what position of life we are in."

—From "The Superintendent's Column" in the *Silvertown (Ga.) Cord* by W. H. Gibson, Jr., superintendent of Martha Mills.

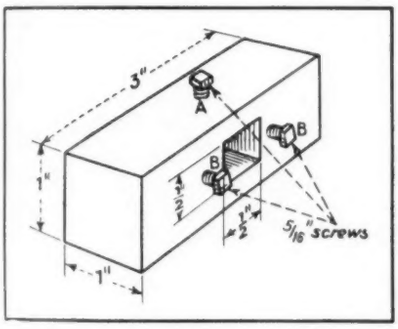
# Overseers' Practical Helps

## Loomfixer's Keypuller

Almost all loomfixers, at one time or another, have had to pull the key from the bottom shaft gear, and most of those fixers know how difficult a job it can be. Almost invariably, if the key is loose in the gear hub, it is tight in the shaft, or vice versa.

The keypuller illustrated provides a simple means of drawing keys, and by using it a loom fixer can save himself the trouble of getting under the loom and swinging a heavy hammer in close quarters. The puller consists of a 1 x 1 x 3-in. piece of steel and has a ½ x ½-in. hole centered through two long sides.

By always leaving about ½-in. of the key protruding, the fixer can place the hole over the protruding end and clamp the puller tight by screwing down on set screw A. Screws B go through the




Keypuller made from steel bar

puller; when screwed in, they press against the gear hub, pulling the key.

C. S. B. (*Pennsylvania*)

## Setting Bunch Builders

Length of bunches on quills is important, especially when weaving is done on automatic looms and when quills are cleaned by a cleaning machine. Bunches must be short to prevent waste of yarn and to get the most out of the quill cleaners; yet, they must be long enough so they will not run out in the loom, causing broken picks.

The first step in adjusting bunches is to check over the feelers on the looms, setting them as uniformly as possible. Then, with the shuttle in the box and the crankshaft on front center, measure the distance from the butt of the quill to the tip of the feeler blade. On the quill winder, set the bunch builder arms so that the bunches will extend not quite to the point where the feeler blade touches the quill. Here, care should be taken that the bunch is laid flat, not high or humped. To reduce the tendency to pile up against the butt of the quill, the bunch should start about $\frac{1}{16}$ in. from the butt.

Allow $\frac{1}{16}$ in. between the bunch and the body of the quill so that bunches will be visible. Next, determine the length of bunch desired, in inches, and using the formula below, calculate the number of teeth to set on the bunch builder.

$$\frac{\text{inches in bunch}}{\text{dia. of quill} \times 3.1416 \times 2 \times \text{wind}} = \text{no. of teeth}$$

Operators of quill winders should be instructed not to bump the bunch builder pawl arm after setting the builder to wind a bunch. Bumping the pawl arm will cause one or more teeth to be knocked off, making the bunch too short.

Alfred King, Jr. (*Pennsylvania*)

# Care of Fire Hose

By MICHAEL BERMAN

*Technical Superintendent, Hewitt Rubber Corp., Buffalo, N. Y.*

**WHEN NEW HOSE** is received do not allow it to remain packed in cases until it may be required. Remove from cases and loosen the coils.

Do not allow hose to remain in trucks or on reels if wet or muddy. Remove all mud by washing or brushing with a coarse broom and expose to air, in towers or on racks, preferably at full length, to dry.

Hose that is antiseptically treated will not mildew or rot if given ordinary care, but continual dampness is injurious to cotton fabrics. Mud often contains metallic or other substances that are chemically injurious to hose if permitted to remain on it.

Do not permit hose to remain on apparatus for any great length of time when not used. It should be removed, hung up in towers or on racks and replaced with a fresh supply. Avoid short bends in hose that is stored away. When necessary to store hose in folds, the folds should be changed occasionally to overcome permanent set in the rubber lining.

Unless hose is likely to encounter a freezing temperature it is not necessary to drain the water out perfectly, as the rubber lining isn't injured by dampness within. On the contrary, hose is benefited by remaining in a moist condition. All rubber lined hose should have water passed through it at frequent intervals to moisten the rubber.

Hose when frozen is liable to crack if bent while in that condition. Extreme cold causes deterioration of rubber but not sufficient to prevent storage of hose in cold-hose houses if thoroughly drained and dried.

Avoid exposure of hose to very hot, dry air. It should not be stored where exposed to the sun's rays. When hose must be kept in hot, dry places it is best to pass water through it at monthly intervals.

When fire hose is being used see that section nearest engine or hydrant is not being chafed at point of contact with the ground by vibration.

Acids and other chemicals, oils, iron rust, etc., as well as fumes arising from some processes, are injurious to hose.

When discharging or recharging chemical engines or extinguishers see that solutions used do not come in contact with the hose.

Be careful that the gasoline tank in your motor car is perfectly tight against drip and vapor. Gasoline separates the rubber from the fabric of fire hose and produces subsequent failure when placed in service.

Before returning hose to apparatus or reel see that the sections (or line of hose) are not twisted. Each section should be laid out straight and perfectly flat on the floor or ground and carefully examined. If not twisted the sections or line of hose will collapse naturally in a flattened condition—if twisted, the irregularities in form of "lumpiness" will be observed or quickly detected when folding the hose on the reel.

## New Machinery and Research Discussed by Piedmont STA

New equipment displayed at the Southern Textile Exposition was discussed at the spring meeting of the Piedmont Division of the Southern Textile Association, held April 12 at Charlotte, N. C. (New machinery shown at Greenville was reviewed in our April issue.)

It was announced at the meeting that the Textile Foundation has made avail-

able a sum of money to employ a research man who will visit the mills and direct tests of general interest to the industry. Preliminary work is expected to begin immediately, and the S.T.A. or Arkwrights would like to receive suggestions as to specific problems for study. It was suggested at the meeting that a good place to start the research would be on some phase of carding, since practically no changes have been made in this process for many years. Published results will be available to the entire industry, both northern and southern.

The meeting was presided over by B. M. Bowen, chairman of the division, who is superintendent of Salisbury (N. C.) Cotton Mills. Election of officers was deferred until the fall meeting.

# Labor Laws Analyzed for S.T.A.

## North Carolina-Virginia Division Hears State Labor Commissioner Shuford

**FEDERAL AND STATE** labor laws were analyzed before the Northern North Carolina-Virginia Division of the Southern Textile Association at its spring meeting by Forrest H. Shuford, commissioner of labor for North Carolina. T. C. Pegram, superintendent of No. 3 plant of Erwin Cotton Mills Co., vice-chairman of the group, presided.

A summary of some of the more important points of Mr. Shuford's address follows:

A work day is 24 consecutive hours, and the North Carolina State law limits men to 10 hr. work and women to 9 hr. in that period. Men can work only twelve out of fourteen consecutive days; women only six days a week. Children under sixteen years cannot work in a manufacturing plant; between sixteen and eighteen an employment certificate must be secured from the County superintendent of public welfare. A girl under eighteen years cannot work more than 48 hr. a week, 9 hr. per day. Boys under eighteen may work until midnight but no later. A seventeen-year old minor helping on a truck is a violation of the Federal law but not of the N. C. State law.

Operatives on piece-work earning an average of 40c. an hour for 50 hr. must be paid at the rate of 60c. an hour for the last 10 hr., since this is considered overtime.

One frequent type of violation is incorrect classification of employees doing overtime work. It is advisable to study the definitions of executive and administrative employees in order to avoid penalties.

Illegal deductions are those transactions whereby the employer makes a profit, such as on store accounts, rents, coal, etc.

A common violation is the practice of allowing employees to start up machines before official starting time and to run them after stopping time, without this extra time being recorded and counted as time worked. If on piece work, they get paid but not the legal time-and-half for overtime. Occasionally, employees work overtime without the knowledge of the supervisor, not to make time-and-half but for a little extra money at the regular rate. This should be watched.

Time-clock records are accepted only when kept properly. There have been cases where employees were allowed or required to come to work a half-hour before punching the clock or to punch it at closing time and work another hour. It is against the law for an employee to come early to clean a machine as much as it is for him to operate it.

Another violation which must be watched is recording hours of work to fit production, such as in the case of a spooler winder who gets 30c. a box. In order to make the minimum required hourly wage he must fill nine boxes in 8 hr. If he can only fill seven boxes in eight hours, he is recorded as having filled seven boxes in six hours, which makes it appear that he received a higher hourly rate instead of a rate actually below that of the required minimum.

Leaving it up to the individual employee to record his own time does not relieve the employer of his responsibility if the law is violated.

**LEARNERS** may be employed only for the occupations specified on the learner certificate; that is, they cannot be employed as learners on jobs such as sweeping or on any other occupation requiring practically no training. The best answer to the learner problem found by one mill is to employ high-school graduates who do not plan to go to college and pay them the legal minimum. Advantage is that they learn quickly and make superior operatives in the future.

Some of the facts which came out of the discussion which followed Mr. Shuford's address are as follows:

A man working on the first shift can work on the second shift to fill in for a sick employee for one day. A substitute must be found within the day, and time-and-half paid if the man on the first shift works more than 40 hr. during the week.

The law does not require rest periods for women in manufacturing plants although it does for women working in stores.

A work day is divided into two 12-hr. periods, and an employee cannot work in both periods; he must have at least 12 hr. off between work periods.

A company is allowed a return of 5½% on property rented to employees before it is considered that the company is making a profit. A larger return cannot be deducted from payroll. Coal can be sold at actual cost plus the cost of handling and overhead. The law as it relates to selling coal applies not only to the company itself but also to any one connected with the company; in one case the superintendent owned the coal yard.

It is all right to give an employee a cash advance against his wages provided no interest is charged on the transaction.

Insurance deductions can be made from the payroll providing the company does not make a profit on the transaction.

Installments due on loans from an employees' credit union may be deducted from the payroll provided the officers of the company have no more interest in the credit union than any other employee. There was one case where 50% of the stock in a "credit union" was owned by the president of the company, 25% by the superintendent and the remainder by two overseers.

Spare hands not put to work immediately should get out of the plant within a few minutes after machinery starts up. When different members of the same family are working on different shifts they should not be allowed to come to work early or linger overtime in order to "visit" with the person on duty.

If an employee for any reason has to work two shifts concurrently, the mill should record the reasons why, since it might be a year before an inspector gets to that mill to check up on the incident.

New officers elected were as follows: T. C. Pegram, chairman; Howard Barton, Marshall Field & Co., Spray, N. C., vice-chairman; J. O. Thomas, Marshall Field & Co., Spray, secretary. J. E. Waverly, of Edna Cotton Mills, Reidsville, N. C., was elected to the executive committee.

# QUESTIONS & ANSWERS

## Making Ski Jacket Cloth

*Technical Editor:*

*As an outlet for spun silk and silk-and-wool blended yarn, we contemplate weaving a poplin cloth that would go into a ski jacket. Would you be so kind as to suggest a suitable warp and filling yarn for such a cloth, using one or both of the above-named yarns? We also will appreciate your giving us any information necessary for the weaving of this cloth. (8713)*

Since you did not state weight of cloth or percentage of blend, we will presume the fabric is to be similar to ski cloths presently on the market. Below are three layouts, for fabrics 28 oz., 24 oz., and 20 oz. in weight. Also given is a layout for a lining fabric, for which we believe there is a demand at present. As a matter of fact, this might prove to be a much better proposition than the ski fabric.

Ski fabric No. 1 is constructed as follows: Finish 60 in. in width—28/29 oz. per yd. 1,500 ends in warp. No. 7 reed x 3 ends per dent = 71½ in. reed width. 24 picks per in. Warp and filling 1.6 typp (1 run, 5⅓ cut). 32.16 oz. + 10% = 35.3 oz. per yd. at perch.

Ski fabric No. 2 has this layout: Finish 60 in. in width—24 oz. per yd. 1,620 ends in warp. No. 5 reed x 4 ends per dent = 80 in. reed width. 20 picks per in. Warp and filling 2 typp (1¼ run, 6⅔ cut). 26 oz. + 10% = 28 oz. per yd. at perch.

Ski fabric No. 3 is set up as follows: Finish 60 in. in width—20/21 oz. per yd. 1,940 ends in warp. No. 8½ reed x 3 ends per dent = 76 in. reed width. 28 picks per in. Warp and filling 3.2 typp (2 run, 10⅔ cut). 20 oz. + 10% = 22 oz. at perch.

The lining fabric is laid out: Finish 32½/33 in. in width—4 oz. per yd. 1,460 ends in warp. No. 19 reed x 2 ends per dent = 38 in. reed width. 38 picks per in. Warp and filling 2/40 (worsted system) silk and wool. 4.16 oz. + 10% = 4.5 oz. at perch.

In finishing, the ski fabrics should be brought up in the head 10 to 12% in the fulling mill. It is important that the cloth be thoroughly clean and free from soap, etc., before being taken out of the washer. Otherwise, difficulty will be experienced in the piece dyeing which follows. After the goods are dyed to standard, rinse and extract, dry to width, then run over napper on both sides. Do not hurry this process, but dig in slowly until the desired nap is obtained. Then, run the cloth over a shear, to match the sample. After this, give the fabric a run over a press, and leave the cloth on rolls overnight. Some manufacturers do not shear ski fabrics; others believe the shearing gives the cloth a better handle.

In finishing the lining fabric, no fulling is required. Give the cloth a light run in the washer, using a light soap and water not over 100° F. Dry to width, and give a light press.

## Dirty Knots in Underwear Crepe

*Technical Editor:*

*Inclosed are samples of an underwear crepe which we are making with 75-den., 48-fil. bright rayon, 48-dent reed, and 88 picks per in. The warp is made from yarn on cones, and knots that come from the cones get dirty while passing through the loom reed. We shall appreciate it if you will tell us what causes this reed to be so dirty. We believe the size may have something to do with it. Or possibly it is the shuttle, as we run large shuttles with fiber all around. (8795)*

Examination of the swatches appears to indicate that the dirty knots were caused by hand knotters. It would seem that the tail of each knot, in catching and binding on successive picks, retained oil or grease picked up from the knotter, until the knot itself wove in. When this occurred, the force of the reed wires was powerful enough to squeeze out some of the oil, which went on to following picks and adjacent warp ends. None of this oil appeared to have spread into the yarns during the short time before the tail was woven in. If the dirty knots were caused entirely by the loom reed, a certain amount of the soiled sizing material would have spread in front of the tail and knot previous to their weaving in. Also, the oily streak left in the wake of the knot would have diminished a short distance after the knot was woven in.

## Preventing Chalk Stains

*Technical Editor:*

*I am sending you under separate cover two samples of chalk used in marking filling lots. The round sample is from one of our sources of supply, and the square sample is our own product. We are unable to get our sample to have the buoyancy, lightness, and weight that is present in the round sample. We are wondering if you can furnish us with any formulas that will help us get the lightness that is present in the sample.*

*Also can you give us information on preventing chalk stains on finished worsted fabrics. (8788)*

We have heard of mills which have attempted to make their own chalk, but are advised that those which have tried it generally go back to the use of chalk made especially for the textile industry by one of the regular manufacturers of chalk and crayon. Only a few companies specialize in the manufacture of chalk for textile use, and there does not appear to be any published information on how such chalk is made.

Usually when chalk stains appear on finished worsted cloth it will be found that the chalk has been allowed to get wet. Sometimes this happens in the winter season if a weaver leaves the chalk on the window sill and the moisture from frosted windows drops on and mingles with the chalk. Even storing goods in a damp building for long enough period of time after they have been perched in the grease and marked with dry chalk will develop chalk marks that nothing will eradicate, not even piece dyeing. There is little danger from chalk if it is used dry and the goods are kept dry until they are fulled or scoured.

Some finishers believe that there is less danger of chalk stains when they use tailors chalk which comes in flat squares and is available in about six different colors.

## Manufacture of Knitted Overcoating

*Technical Editor:*

*We should like very much to get an opinion regarding the following question: In manufacturing 28-oz. cotton-back, knitted fleece overcoatings, there are apparently two methods of procedure. One school of thought follows the principle that it is better to knit approximately 38-40 oz. in the gray and full with a relatively small percentage of elongation and to leave the cloth as near the finished width as possible.*

*Another school of thought holds to the opinion that it is better to knit the cloth 44 oz. in the gray and to full it out approximately 25/30% elongation and bring the cloth down to about 50 inches in width after scouring and then stretch it out to the finished width of 57 in. in the drying process.*

*From our experience, either method will give a piece of cloth with the necessary width and weight, but we are curious to know what effect these two methods have on the finished cloth after they are made into garments. Will the second method*

*shrink more in pressing than the first method? (8785)*

We are of the opinion that the first method is the better, although, as you state, both methods are used. In any knitted cloth, however, it is usually the best policy to keep it as near the original size as possible and, in the case of overcoating, to full in a natural manner. Some manipulation is almost always necessary, but we believe the second method to be more nearly the extreme. We believe the cloth would have more tendency to shrink while pressing, if the second method were used.

## Defects in Cross-Dyed Fabrics

*Technical Editor:*

*We are inclosing two samples of cross dyed material marked No. 1 and No. 2. Warp and filling in both cases is combination yarn consisting of 100-den. viscose crepe and 150-den. acetate. In sample No. 1 the trouble appears to be mainly irregularities in the combination twist. Piece No. 2, in addition to above imperfections, has a number of places with broken crepe ends. Can you enlighten us as to the sources of these difficulties and their remedies? (8796)*

Although there are numerous twist irregularities in sample No. 1, we do not believe this to be your major trouble, as we also noted pronounced irregularities in dyeing. That is, the dye has not penetrated evenly, and in some areas not at all. In sample No. 2, the same conditions prevail plus numerous broken warp ends and some broken filling picks. The breaks in the yarn are due to excessive tension during some stage of manufacture or finishing—probably the latter. We are of the opinion that practically all your trouble is due to improper dyeing and finishing, rather than to faulty weaving. We suggest, therefore, that you take up the matter with the finishing company which is doing this work.

## Edge Lines on Stored Cloth

*Technical Editor:*

*In processing tubular worsted jerseys which have been stored for months we find edge lines in the finished goods. Are these lines caused by: (1) exposure to daylight (not sunlight) over a period of months? (2) change of oil content at that spot?*

*Any suggestions will be greatly appreciated, as we are anxious to correct this trouble. Also, what would you consider the best practice in storing goods away? (8800)*

Worsted jerseys stored for months should be well covered by paper or cloth, and preferably stored where no sunlight or direct daylight will shine on the rolled-up edges. Too long an exposure, even to ordinary daylight, is risky. The edges become bleached, often called "light" bleach, and when dyed they do not take the color the same as cloth that has been kept from the light or new goods just off the knitting machines.

If the jerseys are examined and mended and then rolled up for storage, it is well to roll with the needle line carefully kept on the edge. If this is done, even though there may be a bleach line, it will come on the needle line edge or on the opposite side and do very little harm, except where the cloth is cut double on the opposite side from the needle line. If no attention is paid to how the fabric is rolled, a very unsightly spiral line may develop in the cloth that is stored for a considerable period. Nothing will remedy this and cutting will be made quite difficult.

As regards change of oil content where the edge lines show, if the goods are exposed to direct sunlight the oil will naturally dry out and make it easier for the edges to bleach, but with ordinary care and covering the oil should not dry out enough to cause any trouble.

If the edges have become bleached, there is nothing that can be done in fulling and scouring with any kind of chemicals, soap, or alkali to eradicate the unsightly edge lines. While in the grease or gray, it is always advisable to store cloth in the dark corners of a room, or in bins where a covering can be hung up in front to keep even daylight away from it.

## Cost of Weaving Webbing

*Technical Editor:*

*Inclosed are two samples of 2in. and 3 in. elastic webbing. We would like to know where we can purchase the yarns that go into these webbings. We would also appreciate it if you could inform us as to the approximate cost of the yarn per yard of webbing of each width. Also, the labor cost per yard for weaving each of these webbings. (8793)*

The yarn counts used in these samples appear to be 16/2 warp and 12/2/2 soft-twist filling. Any of the reputable cotton yarn merchants will be glad to quote you prices on these yarns; there are also several sources of supply for the covered rubber.

When you have been quoted yarn prices you will be able to calculate the cost of the yarn in any length of webbing by determining the proportionate weights of yarn in a given short length of either webbing. This is done by extracting the cotton warp ends, then the rubber warp ends; only the filling yarns will then remain. By weighing each group of yarns separately you will be able to determine the proportionate weight of each.

The labor cost of weaving per yard will depend upon the labor conditions in your community. These goods are usually woven on a piece rate basis at so much per gross yd. Once you have determined the weekly wage to pay per loom, the weaving rate per gross may be calculated by the following equation: (Wage × finished picks per in. × 36 × 144 × % loom efficiency) ÷ (picks per min. of loom × 60 × hr. per work week × shuttles per loom) = weaving rate per gross yd.

## Noble vs. French Combing

*Technical Editor:*

*Will you please assist me with the answers to the following questions:*

*(1) Can wool of 64s quality and finer be Noble combed and spun on the English system of spinning? (2) Are there any mills spinning 64s wool on the English system for knitting or weaving yarns? (3) Is it possible to comb on the rectilinear comb and spin on the French system ½ blood 60s, and 62s quality wool? (4) Are there any mills doing this?*

The answer to all four questions is "yes". It is the length of staple and not the quality of the wool which may limit its use to the French system of worsted yarn manufacture. The French system is designed to handle short-staple wools, tender wools, wools containing a high percentage of shorts, and seedy and burry wools. The English system operates best on good staple wools from which a fairly high percentage of shorts has been removed.

The bulk of French yarns are spun from wool 56s and finer, with some short 46s and 50s. Both Noble combed and French tops are used for French yarns.

When grease wool is sorted it is graded as to quality and classified as to length. For instance, a wool may be graded as 60s quality and its length may classify it as clothing, French combing, or combing. However, the classification does not fix the use of the wool. So-called clothing wools are often French combed, and combing wools are not all Noble combed. Noils, coarse wool, Noble combed noils, and even garnetted wastes have been French combed and French spun, making fair yarns. Still, a French combed top does not always mean a short staple top.

# LOOMFIXERS' MANUAL

## RAYON AND SILK SECTION—Chapter V—Continued

By H. E. WENRICH

### The Lay Motion

**THE ROCKER SHAFT** is one of the most important parts on a loom, for upon its proper functioning several other important motions depend. Loomfixers and others often neglect even the oiling of the few bearings which support the rocker shaft, thus unwittingly increasing their work considerably. The rocker shaft requires more attention on the box-motion side or head side than on the plain or drive side. This is because both take-up and box motions are on this side. And each motion connected with the rocker shaft will cease to function properly if the rocker shaft become defective.

The rocker shaft receives its reciprocating movement through the lay; as the lay moves backward and forward, the shaft likewise swings back and forth in a slight arc. Therefore, the setscrews in the lay-sword supports must be kept tight at all times, especially on the take-up side. Some of these supports have but one setscrew; others have two. Whenever placing new supports on a shaft, it is well to equip them with two setscrews; this helps avoid later trouble.

When some motion or part that is partially controlled through the rocker shaft gets out of adjustment, it is advisable first to make sure the shaft itself is in perfect working order. When called to adjust some other part, a glance by the loom fixer will often disclose a rocker shaft that is damaged or out of adjustment. Should the lay appear low on one side it is likely that the shaft has broken off inside the loom frame near the bearing, or that the bearing has worked loose. To make certain, grasp the lay end affected; if it can be lifted freely, the shaft needs attention.

Sometimes when trouble is encountered with the center filling-stop-motion, a loomfixer adjusts the lifter rod and pays scant attention to the rocker shaft. The same is true when a loom is continually banging off, when the pick-wheel is missing, when high or low shuttle-boxes are found, when shuttles are flying out, and when other similar parts go suddenly out of timing. In every one of these cases, the loomfixer would be well advised to make a check first on the rocker shaft.

When a loom is banging off with the shuttle inside the shuttle box, a close inspection of the protector-rod dagger-point in relation to the knock-off plate will disclose whether the rocker shaft or lay-sword foot is at fault. Should the box swell be shaped correctly, but the dagger point be striking too high into the knock-off plate or into the breast beam, it may be that the bearing on the rocker shaft is loose or that the lay sword has moved up from its support.

If the shaft bearing is loose, the remedy is merely to tighten the bolts or setscrews which fasten the bearing to the loom frame. If the lay sword has moved upward, loosen the bolts securing the foot to the support and lower the lay sword into its proper position. Then retighten the bolts.

If the filling feelers in the center of the lay are too low, the fault may likewise be with a lay sword which has moved upward out of position. For permanent repair where slippage of this type is frequently encountered, two methods can be used. One consists of drilling a hole through the lay-sword foot and support, and placing a pin in the hole. The ends of the pin should be battered slightly to prevent its working loose unless driven out by the fixer for some future adjustment. The other method requires a long U-bolt and a short steel plate or two separate bolts and a pair of plates. These are so fastened over the foot of the lay sword that it is permanently held down in position.

Should filling feelers be too high, it may be found that the rocker shaft has become broken or the bearing loosened, allowing the lay to drop downward. This action forces the lifter rod tightly against the filling-motion dagger-socket, pushing the feeler wires upward above the well. If after making the necessary repairs, the feelers are then too low, it is possible the dagger socket may have been bent or the connector rod forced outward. In either case the appropriate remedy should be applied.

Another indication of a damaged rocker shaft is a shed that is either too high or too low. Should the lay be too low as a result of a broken shaft, the shed will be raised off the raceplate. Lowering the shed will not remedy the trouble; the only correct fix is to repair or replace the damaged shaft. Likewise, a shed low on one side should not be raised until the fixer has made certain that no shaft bearing is loose and that the lay sword has not slipped upward.

When a shuttle box goes out of order suddenly on a multiple-shuttle loom, causing a low or high box, it may be the result of a loose rocker-shaft bearing, a worn bearing, a worn shaft inside the bearing, a broken shaft, or a lay sword which has slipped upward. High shuttle boxes result when the lay drops out of position, bringing the raceplate below the level of the shuttle-box's bottom cell plate. Low shuttle boxes result when the race plate is forced upward above the bottom cell plate.

Sometimes a loomfixer is called to a loom on account of faint barre marks, wavy cloth, or irregular streaks running across the face of the material, and will find that the pickwheel is missing a tooth or taking up two teeth in place of one. Before checking on the pull pawl and hold pawl on the pickwheel, a check should be made on the setscrews holding the lay-sword support on the rocker shaft. If these screws have worked even slightly loose, the movement of the shaft required for the proper take-up of the pickwheel will be lost. Nearly the same result will sometimes occur when there is a loose bearing on the take-up side.

At times, when tightening up a pull-pawl adjustment, the force used will cause the pawl arms or levers to move. If this occurs, the setscrews on the lay-sword support will be found to be loose; or, once in a great while, the setscrews on the picking-stick shoe will be loose.

Occasionally, when a loom is rocking, fixers place strips of leather or thin boarding beneath the loom frame at one or both ends, to prevent this rocking. In placing this packing, be careful to inspect for rocker-shaft wear by lifting up on the lay ends. If wear is noticeable, place the packing under the loom frame in the back; for if in such circumstances it is placed in front, the center stop motion and pro-

tector motion will be thrown out of adjustment.

When a rocker shaft has become badly worn inside the bearing, allowing the lay to drop, the shaft can be turned so the worn part will face either front or back, thus putting unworn metal in contact with the bearing at the bottom. In making this change, first loosen all setscrews on sword supports, check-spring holders, and picker-stick shoes.

Another way to repair worn shafts is to drive the shaft further in from one end so a new surface is presented to about half of the bearing. Make sure the shaft end does not crowd the picker-stick shoe and force it away from the loom side. If this should occur, saw off a short piece of the shaft end to correct the length on the side that gives the trouble.

Rocker-shaft bearings which have become worn should always be replaced, regardless of whether the shaft is repaired as described in the foregoing paragraph, or removed and a new one installed. These bearings come in different sizes and shapes, according to year and model of loom.

Plain bearings usually require fitting and care should be taken to fit them carefully into the bearing support before placing them upon the shaft. When fitting plain bearings into place upon a shaft, generally they must be reamed out so they will fit without forcing. If this suggestion is not strictly adhered to, the rocker shaft is likely to burn or freeze fast to the bearing, causing considerable trouble.

Newer looms are equipped with roller bearings; these do not ordinarily require as much attention as plain bearings. When roller bearings become cracked, broken, or scored, they should be removed and new ones installed.

Rarely is it necessary to move a loom out of position to replace a rocker shaft. On modern looms with heavy girts, the shaft can be swung out below the roller bearing on the open-aisle side. On looms without heavy girts but with rod or pipe frame, the shaft can be swung under the pipe and brought out in front of the loom. In removing a shaft, tie or prop the lay ends up in such a manner as to relieve weight from the shaft. A 1x6-in. board can be fitted at each lay end so one end rests upon the floor and the other end is forced under the lay end. This will make it possible for one man to replace a shaft, whereas two might otherwise be required.

Remove bearing bolts and lay-sword support bolts. (On looms equipped with split supports, the support can be removed, rather than the lay-sword support bolts.) Remove picker-stick shoes and other castings, such as the center lay sword and center bearings, if any. Lay all parts down near the place from which they were removed, so that in reassembling the parts will be in handy position. When every casting connected to the rocker shaft has been removed or loosened, push the shaft out of the bearing from the side on which it is to be removed, but in the opposite direction. After the shaft is out of the bearing, push it to the front or back in the direction it is to be removed.

On plain-bearing looms it is often necessary to remove the free bearing from inside the loom frame and then shove the shaft through the hole in the bearing support in order to release the bearing on the opposite side. After each bearing has been removed, the shaft is worked back and brought out from under the loom.

# COTTON SECTION—Chapter XV—Continued

By IVAR MOBERG

## Box Motions

**A HIGH-SPEED METHOD** of leveling shuttle boxes has been developed by the writer, using an especially devised height gage to measure the height of the boxes wherever they happen to be. This gage, shown in Fig. C93, is a combination of a straightedge and depth gage. It can be used for any type of box motion with equal advantage and saving of time. The height of the box floors is cross checked; that is, the height of the first box is checked with that of the second or third and, after adjustment of lift, the height of the second or third box is checked with that of the first. This eliminates return movement of the boxes to be checked with the standard height of first box. Also, the lift of the boxes can be checked at any height, regardless of its relation to the raceplate. The time required for leveling boxes by this method is less than 6 min., even when all adjustments have been disturbed to their limit.

The procedure of leveling the boxes by this method includes the following:

Set all studs in the centers of their respective slots.

Measure height of first box with gage. Do not level it with the raceplate.

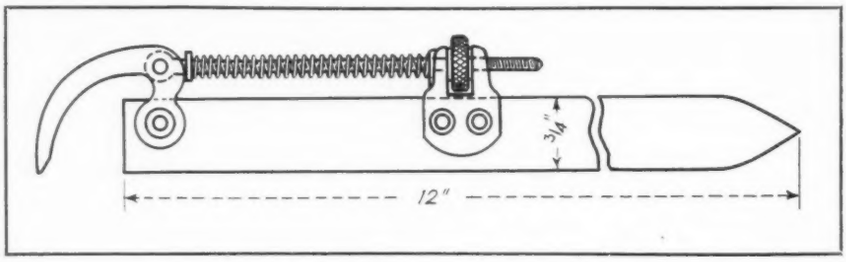



Fig. C93. Shuttle box leveling gage

Bring up the second box and check its height with the gage. Adjust, if necessary, then take the new height of the second box, using the gage.

Bring the first box down and check its height with the gage. If it is too high, increase, and if it is too low, decrease, the amount of lift on the second box. Take the new height of the first box with the gage.

Bring up the second box and check with the gage. If correct, make no further adjustment of the amount of lift on the second box.

Bring up the third box and check its height with the gage. If it is too high, decrease, and if it is too low, increase, the amount of lift on the third box. Take its new height with the gage.

Bring the first box down and check its height with the gage. If it is too low, decrease, and if it is too high, increase, the amount of the lift on the third box. Take the new height of the first box with the gage.

Bring up the third box and check its height with the gage. If correct, make no further adjustment in the amount of lift on the third box.

Raise point of gage and, using the lower straight edge of the gage, level any one of the boxes with the raceplate. It will be found all boxes are now level with the raceplate when called into position. Box floors should be 1/64 in. higher than the raceplate. The height of the fourth box will be correct if the lift of the second and third boxes are correct.

# NEWS OF THE MONTH

## Taxes on Cotton May Wait

Several bills pending before Congress provide for a processing tax to be paid by cotton spinners. A typical one of these proposals would require spinners to buy marketing certificates from the Government at the rate of 5¢ a pound. The Cotton-Textile Institute estimates that the actual tax on domestic cotton (there would be exemptions on cotton exports and un-processed cotton) might run as high as 7½¢ per pound. If the rate should run 6¢ per pound, the total tax bill would be $240,000,000 with domestic consumption at 8,000,000 bales. This would mean for the industry an increase in its raw material cost of about 60%, according to C.T.I. Hearings were expected to continue two or three weeks, as this was written.

Proceeds of a processing tax would go direct to farmers as parity payments. But meanwhile an item of $212,000,000, possibly $300,000,000, for parity is pending in the Agriculture supply bill for 1942. Congress probably will not pass *both* processing tax and the parity appropriation. Students of the subject believe Congress is exploring the tax proposal for next year or later, but will not pass it now.

## Henderson Warns on Combed Yarn Prices

Ceiling prices for combed cotton yarn will be imposed if current "fictitious levels," which represent a premium over prices received by the producers, are not corrected, Leon Henderson, administrator of the Office of Price Administration and Civilian Supply, said on May 1 at the conclusion of a conference with spinners and representatives of other Federal defense agencies. Mr. Henderson's statement took the form of a formal press release. The conference, held at Mr. Henderson's invitation, included combed yarn spinners from the southern and northern divisions of the industry.

Mr. Henderson's release stated that at the conference he emphasized his disinclination to impose any form of mandatory control except as a last resort.

The press release went on to say that the spinners present stated at the conference that the industry had cooperated to the best of its ability in increasing production to meet the increased needs of the defense program. They were quoted as stating that they were in agreement that many of the recently reported bids for combed yarn represented fictitious levels and were in many cases merely bid prices for small amounts urgently needed by certain manufacturers to fill contracts.

## Foundation's Annual Meeting

At the annual meeting of the board of directors of the Textile Foundation in Washington, April 16, Franklin W. Hobbs was elected chairman for the 12th consecutive term. In addition to routine annual business, the directors received progress reports on the work of the Foundation's Research Fellows at the Bureau of Standards at M. I. T. Published reports received at the meeting are entitled "A One-Year Textile Course for College Graduates," and "What to Do About Denim Stocks," the latter being mentioned elsewhere in this issue. The directors of the Foundation are Franklin W. Hobbs, chairman; Frank D. Cheney, treasurer; Donald Comer, Secretary of Agriculture Wickard, Secretary of Commerce Jones, and Edward T. Pickard, secretary.

Earlier last month there was a semi-annual conference of the deans of textile schools in Asheville, under the auspices of the Foundation. In addition to the deans, there were present Mr. Hobbs, Mr. Pickard, F. M. Feiker, the Foundation's consultant on textile education, and Douglas G. Woolf, editor of TEXTILE WORLD.

SMART BATHING SUITS and beach coat in chalk white Sharkoda of Eastman acetate rayon. This sleek sharkskin weave from Cameo Fabrics is not affected by salt water or perspiration . . . will not turn yellow.

## Graniteville Honors Its Founder

A most appropriate and graceful public-relations job was the recent publication in book form, by the Graniteville (S. C.) Co. of "Essays on Domestic Industry," written by William Gregg, founder of the company, and published originally in the *Charleston Courier* in 1844.

As the leading proponent of industrialism in the South, Gregg had purchased, about eight years previously, a considerable interest in the Vaucluse manufacturing establishment. Just prior to the publication of the articles, he made a tour of inspection through the manufacturing districts of the northern States, which not only confirmed all his previous impressions but, as he expressed it, "probably excited in me too much enthusiasm on this subject." The result was the series of essays. In the following year, he founded Graniteville, and that is today his monument.

As Leavelle McCampbell, in a foreword to this book puts it: "It is altogether fitting that we, who now carry on the work that William Gregg began almost a century ago, should express our respect and affection for this extraordinary man who was successively jeweler, merchant, capitalist, author, entrepreneur, architect, engineer, builder, and mill executive

# New Penn Salt tank cars

**A new fleet of caustic soda tank cars, recently put in service by Penn Salt, is now rolling the rails to bring you better, cleaner caustic and to reduce your unloading costs.**

**Cleaner Caustic Soda**—**because each new tank car has a protective lining, special draining plates in the dome, and alkali resistant valves and interior fittings. And Penn Salt Caustic Soda is doubly refined . . . extremely low in carbonate, salt and iron.**

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**PENNSYLVANIA SALT**
**MANUFACTURING COMPANY**
*Chemicals*




by doing his Essays into a little volume, bound in cloth made by his beloved Graniteville, and dyed Confederate gray in a plant which we have named for him."

## Worth Street Rules Revised

Publication of a revised 1941 edition of Worth Street Rules, with an effective date of April 17, 1941, was announced by the Association of Cotton Textile Merchants of New York, distributing agent for the Rules. These are now approved by 13 buying, selling and producing organizations, which have collaborated in their sponsorship.

The 1941 edition includes the revised Standard Cotton Textile Sales Note, four fabric specifications, the revised panel and rules of the General Arbitration Council of the Textile Industry, definitions and trade customs, and other data. In addition, it contains for the first time the Trade Practice Rules for the cotton converting industry and the Trade Practice Rules for the shrinkage of woven cotton yard goods, as promulgated by the Federal Trade Commission.

In announcing the publication of the Rules, W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, paid a tribute to the committees from the various trade groups which have worked together so effectively, and especially congratulated the chairman, Leavelle McCampbell, referring to him as "again the guiding genius of constructive cooperation," on another outstanding contribution to the welfare of all interests in the cotton goods trade.

## Labeling Act Unlikely of Postponement

Little hope was held at this writing for passage of a bill in Congress providing that the effective date of the Wool Products Labeling Act be extended to "thirty days after the making and signing of a treaty of peace between the

MISS CATHERINE GRAY (above), daughter of Mr. and Mrs. C. D. Gray, Sr., of Gastonia, N. C., and granddaughter of the late George A. Gray, pioneer textile executive of Gastonia, will be crowned Queen of Gastonia's Fourth Annual Grand Cotton Festival during the week of June 9 by Governor J. Mel Broughton. Joseph W. Lineberger, (at right) young textile executive and son of A. C. Lineberger, one of the deans of the combed yarn industry, Belmont, N. C., has been selected to reign as King.

# UNSURPASSED *in* P-Q*

## GREATER FIBRE PENETRATION and LUBRICATION ABSOLUTELY UNIFORM AT ALL TIMES"

And what is P-Q you ask? P-Q is the higher production quota . . . the increased production, the improvement in product quality, the cost reductions obtainable when material, equipment and processing oil are right.

A large processor of worsted stocks was always satisfied with his previous way of processing until he tried SUNOTEX OILS. He found SUNOTEX WO-220 . . .

- AS GOOD OR BETTER THAN THE FINEST OLIVE OIL HE COULD BUY
- GIVES GREATER FIBRE PENETRATION AND LUBRICATION
- IS EASIER TO HANDLE
- HAS NO OBJECTIONABLE ODORS
- IS ALWAYS ABSOLUTELY UNIFORM

He proved in his own plant that he could step-up his output with these modern, newly developed oils that make possible a higher production quota — P-Q.*

Perhaps your present methods of processing wool and worsted have been out-moded by these new SUNOTEX OILS. Now's the time to investigate how you can step-up the P-Q* of your plant with SUNOTEX OILS. Write for the folder that explains P-Q* and what it can do for you. — SUN OIL Company, Philadelphia, Pa.

*EQUIPMENT + RAW MATERIALS + PROCESSING OILS = PRODUCTION QUOTA

# SUNOTEX OILS

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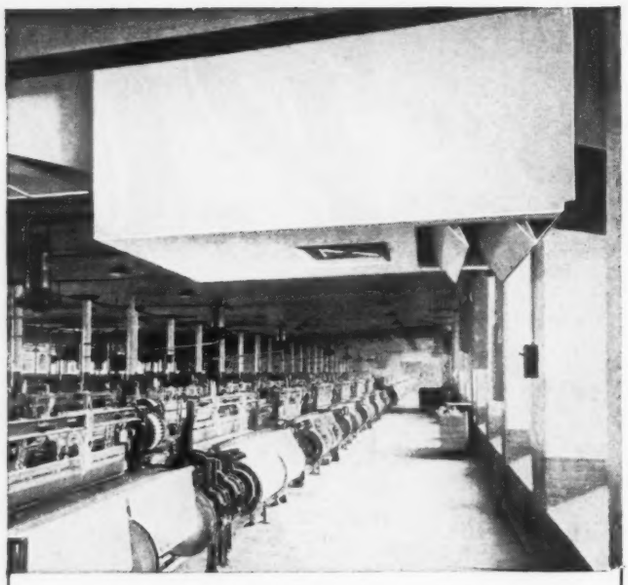
SUN OILS

PETROLEUM PRODUCTS FOR ALL INDUSTRIES



# Behind the Airchanger . . . AN IDEA

In developing the modern Airchanger idea for you, we started to answer the questions you textile men have been asking. Why up and down humidity? Why spotty conditions?

The Parks Automatic Airchanger measures incoming air. Admits only just so much. Just as much as constant humidity will permit—and NO MORE.

In hot weather it gives you all the evaporative cooling the humidifiers can develop. Keeps them running. Lets in as much air as possible.

On the contrary, the cooler the weather, the more the incoming air is restricted.

But all the time it is the humidity that stays put—and in all parts of the room.

It is that kind of automatic regulation that makes it an Airchanger. And only the Parks Automatic Airchanger has regulation like that.

**Parks-Cramer Company**

*Certified Climate*

Fitchburg, Mass. Boston, Mass. Charlotte, N. C.

MISS EMMOGENE SHIELDS of High Point, a Meredith College student and winner of the Grand Prize at the 14th Annual Style Show, April 24, conducted by the Textile School of North Carolina State College in cooperation with the home economics departments of 10 North Carolina colleges. Miss Shields wore a blue and white granite weave check of cotton by J. W. Alexander and M. L. Crawford. The white portion was made from a cotton pique designed and woven by A. R. Gewehr and J. R. Scoggins.

German Government on the one hand, and the British Empire on the other . . ." The bill was introduced by Sen. Elmer Thomas of Oklahoma, and is now before the Committee on Agriculture. This Committee has asked for reports from various departments of the Government. Meanwhile Leon Henderson, Administrator of the Office of Price Administration, has expressed the opinion that the extension of time would have little effect on the price of wool and wool products. Control of price is the stated object of Sen. Thomas' bill. Effective date of the law is July 14, 1941.

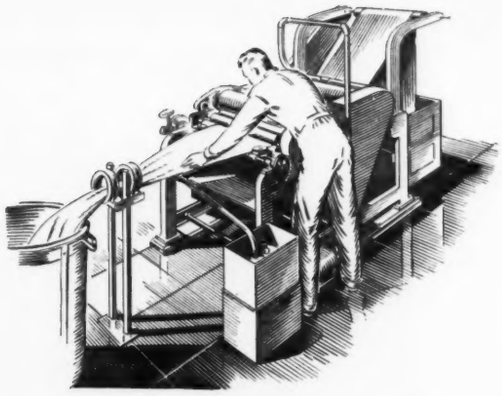
## First Inventory Study Deals with Denims

The first of a series of seven studies on "Inventory Policies in the Textile Industries" has been published by the Textile Foundation under the title of "What to Do About Denim Stocks." The study was made by members of the Industrial Research Department of the Wharton School of Finance and Commerce, under the auspices of the Textile Foundation, and on the recommendation of the Committee on Economic Research of the U. S. Institute for Textile Research.

To facilitate the use of this general inventory study by those directly concerned with the management of textile inventories, it has been prepared and published as seven separate monographs, of which the denim report is the first. Other reports will touch on men's wear, cotton fine goods, rayon woven goods, cotton print cloths, full-fashioned hosiery, and textile inventories in general. The denim report, and subsequent separate reports, may be obtained from the Textile Foundation, Commerce Building, Washington, D. C., at 50¢ for each report or at $3.00 for the series of seven.

## Mothproofing Military Fabrics

Methods of protecting fabrics, uniforms, blankets, and other military supplies made of wool, mohair, fur, or bristles are outlined in a circular issued by the U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine to aid National Defense agencies in combating moths and other insect pests. After describing the insects involved and condi-



# . . . every desired finish on tubular knit goods!

"We are producing finishes hitherto unobtainable in the knit goods field as the result of installing a Tube-Tex Double Extractor and Processor recommended by Butterworth Engineers.

"Now our competitors must take a back seat when the specification calls for a special finish—softening, sizing, filling, stiffening, non-curling, water-proofing, lusterizing, delusterizing, weather-proofing or fire-proofing.

"The Tube-Tex Machine opens the fabric to its tubular proportions, extracts it uniformly, treats it chemically and delivers it flat folded—ready for drying—at speeds ranging from 6 to 48 yards per minute.

"We have found the Tube-Tex Machine adaptable for all types of circular knit fabrics in all widths and qualities, ranging from light rayon to heavy cotton worsteds for underwear and outerwear.

"Our cost figures show that the Tube-Tex has actually paid for itself in time, labor, and power savings. "We can only marvel at this powerful competitive advantage."

Trying to "get by" with out-of-date equipment in the wet end of textile finishing is poor economy, no matter how you figure it.

With business as it is today, new equipment pays for itself two or three times as fast as it does under ordinary conditions.

For more than 120 years, our entire time and effort have been devoted to promoting efficiency in the wet end of textile finishing. Butterworth Engineers know all the small advantages in production costs which, collectively, make the difference between profit and loss.

Let us work with you in determining whether modern Butterworth Machines or improved plant layout will help you to improve your competitive position. Write us fully about your requirements.

H. W. BUTTERWORTH & SONS CO.
Phila., Pa., Serving the Textile Industry Since 1820.
Offices: Providence, R. I. and Charlotte, N. C. In Canada—W. J. Westaway Co., Hamilton, Ont.

***64%**

**of equipment now in use in the wet end of textile finishing cannot operate at a profit in competition with modern machines.**

*Proved by Research

# Butterworth

Licensed Manufacturers and Agents for Tubular Textile Machinery Corp., 27 W. 20th St., New York.

3 great Fluorescent lighting benefits!
1. All the light you need now
2. Quicker, less expensive installation
3. Freedom to rearrange operating equipment without changing lighting
... with IVANHOE "50 FOOT CANDLER" RLM Continuous Wireway FLUORESCENT LIGHTING SYSTEM

• IVANHOE FLUORESCENT "50 FOOT CANDLER" offers these 3 great lighting benefits to key industries—textile mills in particular. IVANHOE "50 FOOT CANDLER" will do these profitable things for you because it is *not* a lighting fixture but a *lighting system* . . . the first RLM *Continuous Wireway* Fluorescent Lighting *System* providing new higher levels of illumination at economical cost.

In one case, for example, a well-known manufacturer made a net saving of $8,000! In another, a key Defense plant, the operating cost of "50 FOOT CANDLERS" was but a fraction of a cent per man-hour of production! In still another case, exclusive features of the "50 FOOT CANDLER" gave the user the option of adding a third lamp for a 45% increase in illumination when, as and if he needed it!

Think what similar benefits could mean to you in your mill right now! Then . . .

Write today for new "50 FOOT CANDLER" Bulletin 1C.

THE IVANHOE MARK
OF A COMPLETE LIGHTING SERVICE

THE MILLER COMPANY
MERIDEN, CONN.
*Pioneers in Good Lighting Since 1844*

SHRINKAGE RESISTANCE of men's woolen socks treated with Kolok, process recently introduced by United States Rubber Co. is demonstrated above. Sock at left is new, unlaundered; that at right, untreated, was laundered 50 times; center sock, Kolok treated, was also laundered 50 times. The process consists of depositing within fabrics minute particles of latex solids. It is said to double wear of treated textiles and to impart resistance to moth damage. It can be applied to hosiery, underwear, suitings, overcoatings, sweaters, gloves, blankets, upholsteries, etc. Kolok-treated women's hosiery may be on market within a month; first men's hose so treated will reach retail counters in the fall. U. S. Army is said to be testing use of process on wool hosiery and underwear

tions favorable to attack by fabric pests, the bulletin discusses use of mothproofing methods and of flake naphthalene or paradichlorobenzene.

According to the bulletin, from the standpoint of military operations, mothproofing treatments should be applied to suitings and fabrics in the manufacturing process, preferably in the hot dyebath, two products suitable for use in this way being Demotex and Eulan CN. Clothing or fabrics so treated should remain resistant to the attack of fabric pests up to the time they are issued and thereafter at least until washed or dry-cleaned about six times.

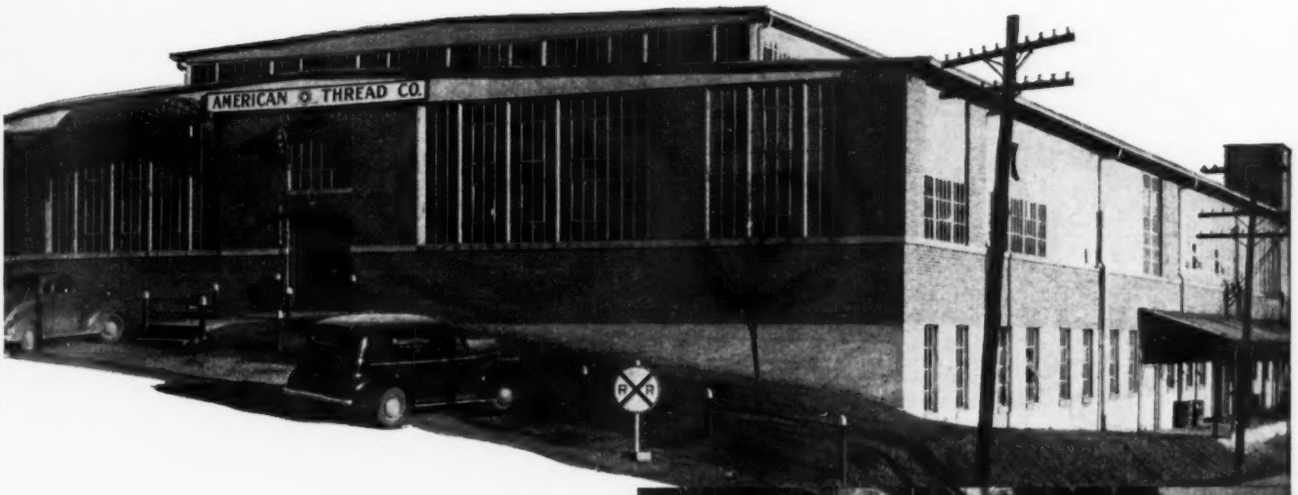
The bulletin points out further that while flake naphthalene and paradichlorobenzene are good killers of fabric pests, once the vapors produced by evaporation of these compounds are dissipated, the commodity becomes susceptible to infestation. Likewise, it states that the present cost of inspection and retreating of fabrics in storage with naphthalene is considerable.

## Survey of Full-Fashioned Field

According to the "Statistical Survey" just issued by the Textile Machine Works, Reading, Pa., there were 16,200 full-fashioned knitting machines installed in American mills on March 31. This thirteenth annual survey calls attention to the three following facts: (1) The trend to 51-gage equipment is greatly accelerated; (2) in 1940 for the first time the number of machines scrapped (about 450) exceeded by over 100% the number of new machines installed during the same period; (3) the number of new mills installing old machines obtained from liquidated mills is definitely declining. It is estimated that at least 3,000 machines are economically obsolete because of slow speed, poor physical condition, or obsolete gage. Of the installed machines, Pennsylvania is credited with 42.4%, the South with 36.6%, the

# Bigger business for American Thread Co. ...and SOFT WATER helps!

*Another Permutit success story!**




## Permutit equipment needed to produce quality thread,

***says Mr. Don Maddox, Agent***

The American Thread Co., Bristol, Tenn., does bleaching and dyeing of thread, and in order to do this, must have the best water conditions possible. The raw water is variable and very hard. So ten years ago they installed Permutit Water Softening equipment. Now the water is uniformly soft and clear. Mr. Maddox says Permutit has been a contributing factor in the company's enlarged business.

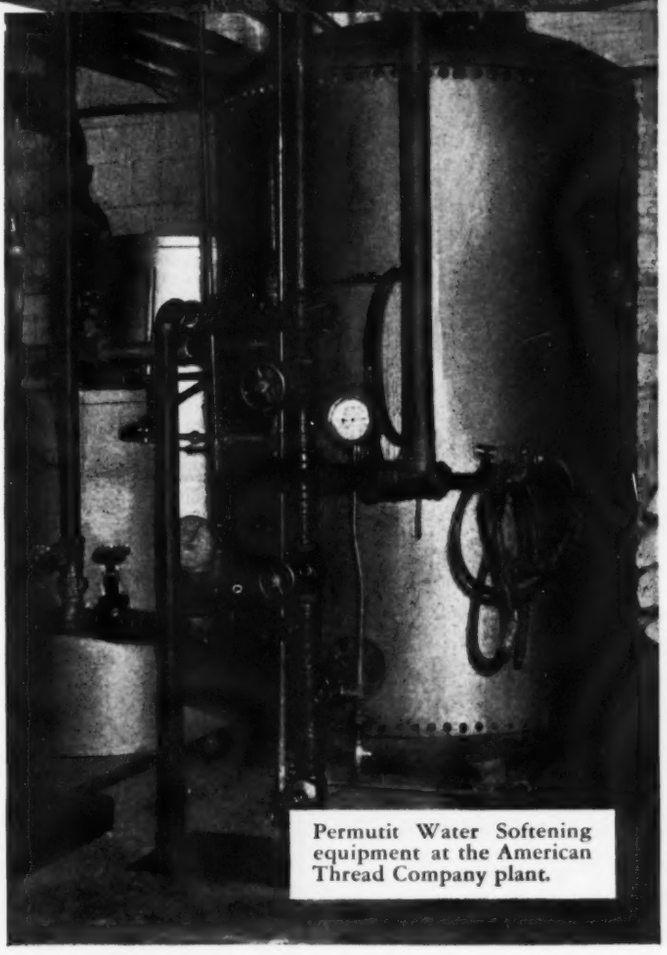
Permutit installations offer the greatest protection in process water, because they're designed to suit individual plant requirements. This means bigger savings, too...in soaps, detergents, dyes, in boiler repairs.

Write for free booklet to The Permutit Company, Dept. B 330 West 42nd Street, New York, N.Y.

*Trademark Reg. U. S. Pat. Off.

**PERMUTIT**

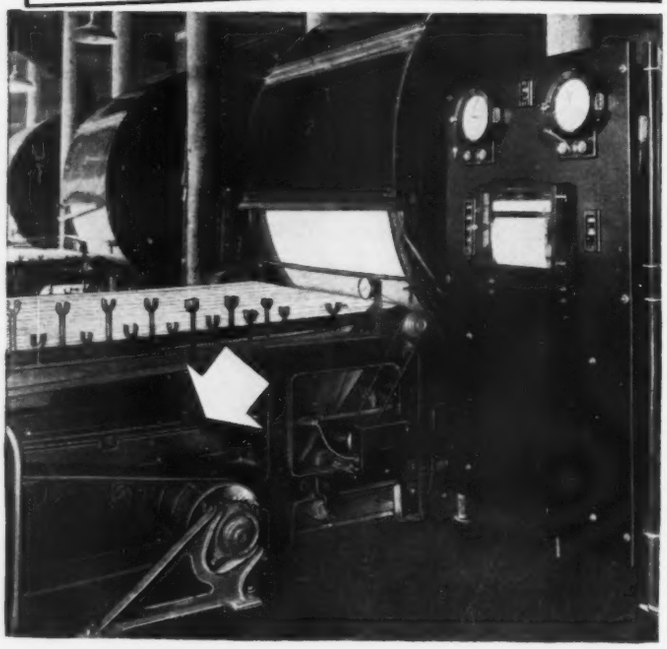
**WATER CONDITIONING HEADQUARTERS**



Permutit Water Softening equipment at the American Thread Company plant.

# SLASHER OUTPUT UPPED 25% to 40%

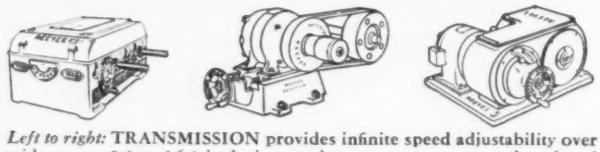
**with REEVES Hydraulic Automatic Speed Control**



## ▶ Regain Held Within One-Half of 1% of Desired Value . . .

**REEVES has aided in the development of many new production methods and controls. Shown here is a new moisture content controller on a cotton yarn slasher (dryer) in a large Maine textile mill. With REEVES automatic speed control this system holds moisture content to a degree of accuracy never before attained, thus greatly increasing production possibilities. Desired moisture value is set by adjusting index on a graphic resistance recorder. When actual moisture exceeds or falls below desired value, the automatic control slows down or speeds up the REEVES, which is connected to main drive shaft of slasher, thus restoring desired volume. Similar installations of REEVES drives and controls, on many different textile machines, will be described on request. Ask for special bulletin just issued.**

**THE 3 BASIC UNITS IN MODERN REEVES LINE**



*Left to right:* TRANSMISSION provides infinite speed adjustability over wide range, 2:1 to 16:1 inclusive; modern, compact, open and enclosed designs in sizes up to 78 H.P. . . . VARI-SPEED Motor Pulley, simple, direct drive for requirements from fractional to 15 H.P. 3:1 range. MOTODRIVE combines motor, speed varying mechanism and reduction gears; sizes to 10 H.P.; ratios of speed variation, 2:1 through 6:1.

**REEVES PULLEY COMPANY, *Dept. W,* COLUMBUS, INDIANA**

# REEVES Speed Control




## TEXTILE CALENDAR

National Cotton Week, May 16 to 24, 1941.

Cotton Manufacturers Association of South Carolina, annual meeting, Ocean Forest Hotel, Myrtle Beach, S. C., May 23 and 24, 1941.

Cotton Manufacturers Association of Georgia, annual meeting, Cloister Hotel, Sea Island, Ga., May 29 to 31, 1941.

Philadelphia Textile School Alumni Association, annual outing, Manufacturers Country Club, Oreland, Pa., June 6, 1941.

Southern Textile Association, annual meeting, Ocean Forest Hotel, Myrtle Beach, S. C., June 13 and 14, 1941.

Chicago Yarn Men's Golf Tournament, Barrington Hills Country Club, Barrington, Ill., June 18, 1941.

Philadelphia Textile Manufacturers Association, 15th, Annual Outing, Cedarbrook Country Club, June 18, 1941.

American Association of Textile Chemists & Colorists, annual meeting and convention, Carolina Hotel, Pinehurst, N. C., Oct. 31, and Nov. 1, 1941.

West with 12.5%, and New England, New York and New Jersey with 8.5%. In March 1941 there were 550 mills in operation, of which 266 or about 48% have fifteen machines or less. During 1940, 33 mills involving 817 machines were liquidated, 59 new mills established, of which 47 were started with second-hand equipment, and at the end of the year 30 mills with a total of 350 machines were closed pending liquidation.

## Wool As a Food—Will the Labeling Law Hit It?

Published reports indicate that Dr. J. I. Routh, of the University of Iowa, has discovered that sheep's wool ground into powder is a nutritious food. It is said to contain seven out of the ten acids vital to human diet. Doubtless pastries made from this new product come under the Wool Product Labeling Act, and if and when marketed should be designated whether wool, reprocessed or reworked. Dietitians may now talk wisely of varying virtues of each type, if the moths don't get there first!

## Poe Mill Wins NLRB Case

When a mill wins a case brought against it by the National Labor Relations Board, it's news! Consequently, F. W. Poe Mfg. Co., Greenville, S. C., made good news last month when Trial Examiner W. P. Webb recommended that the complaint of discrimination against a union employee be dismissed, after a year of litigation. The examiner held that Coley Smith, complainant, has been laid off in the regular course of business and when ordered to report on the spare floor for work refused to do so. Gist of the decision was that the company had not in any way violated the provisions of the NLRA.

## More New Uses for Nylon

Nylon neckwear made its appearance last month in retail circles. Cheney Bros. offers a line to retail at $1.50 and in other quarters there are ranges at $1.

A Nylon evening dress has made its appearance, being offered at $49.95 at Best's in New York. The fabric is a starched chiffon from Duplan. Although fragile looking, it is said to be crease-resistant, water-repellent, and packable.

Among the lace tablecloth numbers of Scranton Lace Co. are two made of Nylon. These retail at about $25.

Nylon-strung tennis rackets have also been making an impression in the retail field. They are said to be moisture-resistant and slow to deteriorate.

Nylon stockings in ombre shadings were displayed last month at the DuPont exhibit in Atlantic City. Nylon half-

# *Amazing Economy of*
# FRIGIDAIRE WATER COOLERS
## due to Famous
## ← METER-MISER!

### Efficient Frigidaire Mechanism Protected for 5 Years Against Service Expense!

● This Frigidaire Water Cooler is just what you need for most industrial purposes. It has full 10 gallons per hour capacity*—is built to stand up under the hardest kind of usage. It is powered by the world-famous Meter-Miser, the same type mechanism proven dependable and trouble-free in over 2½ million Frigidaire refrigerators and water coolers. Quiet and efficient, this Meter-Miser has an exclusive rotary design, eliminating pistons, connecting rods and other parts that cause friction and wear. Permanently sealed and oiled for life, it is protected for 5 years against any service expense.

**Many Outstanding Features!** In addition, Frigidaire Water Coolers are unusually compact, have stainless steel top . . . bonderized sides . . . pre-cooler for speedier cooling . . . new Magic Action bubbler . . . self-cleansing tank . . . finger-tip temperature control . . . attractive appearance . . . optional foot pedal at slight extra cost . . . and many other advantages.

**A Cooler for Every Need!** Frigidaire offers a complete line of water coolers for every industrial and office requirement. Ask your nearest Frigidaire dealer to make a survey of your requirements. Or mail coupon below for free catalog.

*Water cooled from 80° to 50° in 80° room, with 60% of water passing through pre-cooler.

**Caution!** It isn't a genuine Frigidaire unless it bears the "Frigidaire" nameplate! Frigidaire products include: Water Coolers—Air Conditioners—Beverage Coolers—Refrigerating Equipment for all purposes.

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*The Greatest Name in Refrigeration*

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☐ Please send me complete water cooling catalog!
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**Darnell Casters**
**& E-Z ROLL WHEELS**

...Let us demonstrate how Darnell Casters and E-Z Roll Wheels will save money and increase efficiency in your organization. Durable, precision-built Darnell Casters & Wheels assure the easy handling of heaviest loads.

**FREE Manual FOR THE Asking**

**DARNELL** *Corporation, Ltd.*
LONG BEACH, CALIFORNIA
36 N. CLINTON ST., CHICAGO
24 E. 22nd ST., NEW YORK CITY



hose for men are coming on the market from numerous sources and in various combinations. Nylon half hose originally brought out to retail at 94c. was cut to as low as 23c. by certain New York stores during a period of active price competition.

Nylon brassieres are reported from the corset trade where they are believed to have a great future.

Paper used for currency by the Government will hereafter have fibers of Nylon instead of fibers of silk running through it—an All-American Dollar Bill.

## A. A. T. C. C. Notes

At a meeting of the New York Section, American Association of Textile Chemists & Colorists, held April 25, Frederic A. Prisley, Haywood-Schuster Woolen Mills, East Douglas, Mass., described a system for controlling the cost of dyeing in woolen mills. Dyeing of mixed fibers in hosiery was discussed by Alfred J. Carbone, of Sandoz Chemical Works, at a meeting of the Philadelphia Section, on May 2.

At a meeting of the Piedmont Section, held last month in Ashville, N. C., B. L. Hathorne described methods of knitting and finishing crepe-de-chine hosiery to prevent twists or bulges in the ankle; Mr. Hathorne also discussed the differences between crepe-de-chine and other hosiery yarns.

## Marshall Field Sells 1500 Houses

Employee houses of Marshall Field & Co., at Leaksville, Spray and Draper, N. C., and Fieldale, Va., approximately 1,500 in all, have been sold to a group of individuals, none of whom is employed by Marshall Field & Co., according to announcement by J. Frank Wilson, production manager of the Manufacturing Division. It was further stated that this sale was made with the understanding that the purchasing group will immediately give each employee an opportunity to buy the company house in which he is living on a basis that is very favorable to the occupant.

## Textile Prices Rise and Support Continues Steady

**Cotton goods** markets were alternately active and quiet through April, and prices were strong and fractionally higher as the month closed. In print cloths nearly all lots of 38½-in. 64 x 60s available below 7c. were sold. Mercerized yarns were advanced 6 to 8c. April 21. Previous advance was March 10 when gains were 4 to 8c. The 60s/2 mercerized ungassed now quoted at 88c. are up 15c. since Jan. 1.

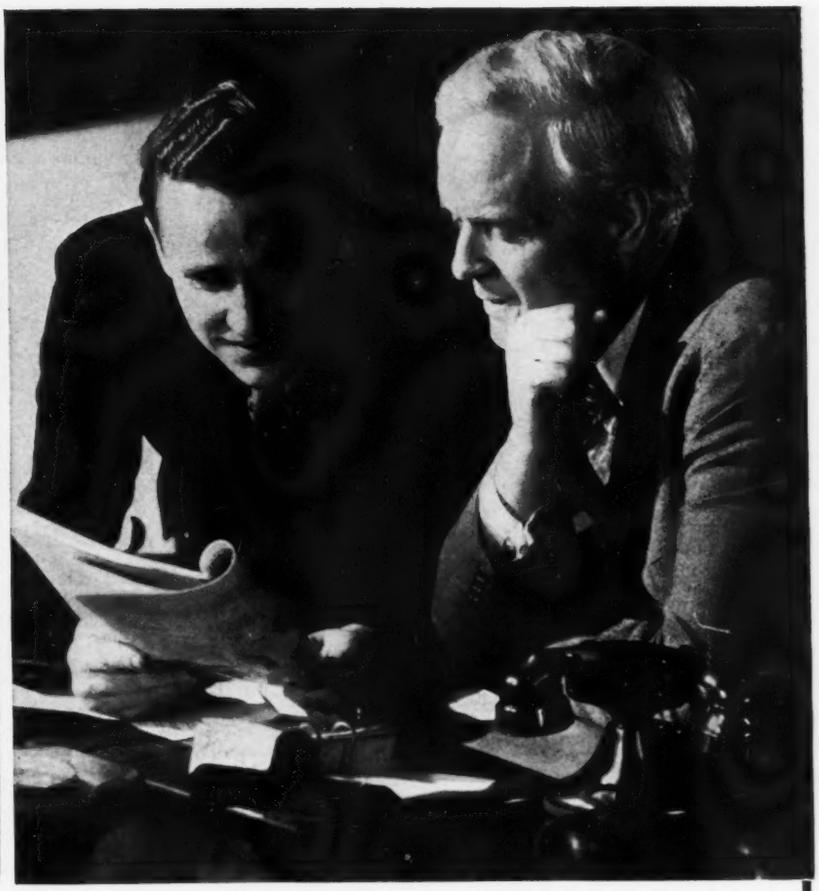
**Wool goods** for spring were estimated to be 30c. to 45c. higher than the opening, although actually nominal since goods are allotted. There will probably be no actual openings in future seasons during the war emergency. Deliveries are the important thing but prices will be limited by public opinion and Government influence.

**Raw silk** was moderately quiet and without marked price change during April. The month closed with Crack Double Extra 78% at about $2.80 in the New York market, with the equivalent grade *D* at Yokohama quoted at 1500 yen a bale. Relatively low takings of raw silk in March were disappointing to traders and changed their previously optimistic outlook.

**Rayon** price advances are considered inevitable, and each month as books are opened for delivery in the next month, a rise is expected. Any such advance will doubtless be conservative and based on higher wages and raw material prices. Deliveries of filament yarn to domestic consumers for the first quarter totaled 101,100,000 lb., an increase of 11% over the deliveries for the first quarter of 1940.

**Hosiery** buyers are confronted with higher prices in seam-

# CONSIDERING IMPROVEMENTS IN YOUR *Processing?* YOU'LL NEED COLUMBIA LIQUID CAUSTIC!



PRACTICAL experience with many new developments in processes employing Caustic Soda makes one point especially clear. Caustic Soda of the utmost purity is a most important essential.

To meet these special needs, Columbia was already well prepared in advance—with Liquid Caustic of exceptional purity—and an entire fleet of newly designed tank cars that keep it pure in transit. In fact, for two full years, these unique Columbia cars have been delivering Columbia Liquid Caustic—both 50% and 73% grades—in perfect condition to meet the specific needs of those who use it.

And this is a point it will pay any user of processing chemicals to remember. *All* Columbia products benefit from the same care in manufacture and shipment that make our Liquid Caustic so suitable for the most exacting requirements. It will pay you to standardize on Columbia Chemicals for your needs.

| | |
|---|---|
| *ESSENTIAL* | • SODA ASH • CAUSTIC SODA • SODIUM BICARBONATE • SILENE |
| *INDUSTRIAL* | • LIQUID CHLORINE • CALCIUM CHLORIDE • HENNIG PURIFIER |
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## PITTSBURGH PLATE GLASS COMPANY

*Columbia Chemical Division*

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STREAMLINED

*for* **SPEED** *and* **ECONOMY**

Terrell's modern bobbin stripping and handling system is designed to give mills maximum over-all efficiency and economy. The new type K machine operates up to 130 bobbins per minute without the slightest damage to barrels or finish. The automatic Bobbin Box Hoist eliminates time out for filling hoppers which often cuts cleaning efficiency as much as 30%. The Conveyor Elevator carries bobbins from the machine thus insuring maximum efficiency all along the line. The economy of this system is evidenced by the records: all installations made to date have paid for themselves in two years—usually within 12 to 18 months.

*The* **Terrell Machine Co.,** *Inc.*

CHARLOTTE, N. C.

Luther Pilling, Danielson, Conn.—N. E. & Canada
E. W. S. Jasper, Inc., Elizabeth, N. J.—Penn. & N. J.
Geo. Thomas & Co., Manchester, Eng.—European Agt.



less goods, partly due to increased yarn prices and partly to higher wage minimum shortly to go into effect. Socks and anklets of mercerized yarn have been forced upward with the recent advances in the yarn. Full-fashioned hosiery remains a puzzle as Nylon volume increases, and competition in silk numbers at retail drives prices to unusual low levels.

**Underwear** sales for fall have been large. Retailers and jobbers have cooperated with mills in placing their business early so that operating schedules may be laid out. Army business is taking a fair proportion of the production and is likely to increase.

**Outerwear** selling agents expect that men's and boys' sweater lines, withdrawn last month, will be reinstated at advances of 5 to 15%. Knitted overcoatings have been briskly ordered and these lines are being withdrawn either as sold up or for repricing. Women's sweaters for fall will be shown in the uptown New York market around May 15.

## This and That

**A new rayon cord** tire for passenger car service has been introduced by the Fisk Division of United States Rubber Co. Because of its rayon construction, the new tire is said to offer longer mileage, greater safety, and added resistance to deterioration due to heat.

**A practical course** in textile testing will be offered by United States Testing Co., July 14 to 25, at the company's laboratories in Hoboken, N. J. There is no charge for the course, but the number taking it is limited to 20.

**A new process** for making cotton tire cord has been released to the tire trade by the Cotton Research Foundation as the culmination of four years of research and an investment of nearly $100,000, according to an announcement made by Everett Cook, president of the foundation.

**A summer course** in principles of textile analysis is announced by Massachusetts Institute of Technology, Cambridge, Mass. The program will be under the direction of Prof. Edward R. Schwarz, in charge of the textile division, and will continue for six weeks beginning July 28.

**Apparel wool stocks** in the United States March 29, 1941, totaled 162,962,000 lb. (scoured basis) compared with 98,860,000 lb. one year ago. The increase is entirely in foreign wool. The domestic wool stocks have decreased. Dealers' stocks have increased about 25%, but stocks of manufacturers are up over 100%. The carpet wool stocks last March were 48,903,000 lb. against 46,889,000 lb. the year previous.

**American Viscose Corp.** stock, soon to be issued, is rumored to consist of 250,000 shares of preferred and 1,750,000 of common.

**Army Quartermaster Corps** is anxious to locate seamless hosiery manufacturers with 48- to 54-needle knitting machines in diameters not below 4½ in. which can be used in the manufacture of a loosely knit rope sock to be made of jute.

**"Mercy by the Yard"** is the slogan for the campaign conceived by a committee of the Chinese Women's Relief Association, New York. Piece goods, dresses, parasols, neckties, etc., executed in Chinese design will be sold and the manufacturing sources will pay 5% to Madam Chiang Kai-Shek through the Chinese Consulate, for relief work.

**An instructive talk** on the history and present status of rayon manufacture was given before the Metropolitan Retail Store Adjusters Association on April 22 by Dr. W. E. Coughlin, research associate of Celanese Corp. of America.

**Military wardrobe** for each draftee is estimated to represent an outlay of about $169.45. He must pay for any equipment lost, but replacements are permitted if the clothing is made unserviceable by wear, lost in combat or accidentally rendered useless.

AQUARIUS

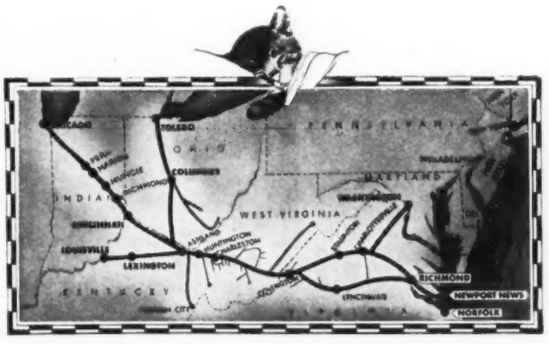
# TEXTILE MILLS ARE *ASSURED* OF ABUNDANT SOFT WATER

## in *The Chessie Corridor*

SOFT, running water, ideal for processing textiles, is a dependable resource of *The Chessie Corridor.* Textile firms seeking new locations will find the kind of water-front acreage they seek in this lavishly watered region. Not only is water abundant, but particularly in the eastern end of *The Corridor* it is very soft. For instance, in Virginia the average of parts of $CaCO_3$ to a million parts of water is only 43 for surface waters, or 56 for ground and surface waters. Little if any treatment is required to make *The Corridor's* flowing streams perfect for textile manufacturing needs.

### THE COMPLETE STORY

of this important area is published in a beautiful book you'll be proud to have in your library—"The Chessie Corridor . . . Industry's Next Great Expansion Area". This is a graphic survey of the resources, conditions and opportunities which beckon industry to *The Corridor.* Copies will be mailed to textile executives requesting them from INDUSTRIAL DEVELOPMENT SERVICE, Chesapeake and Ohio Lines, Huntington, West Virginia.




## Plus . . THESE 7 OTHER VITAL NEEDS

ABUNDANT RAW MATERIALS—both natural and manufactured, including chemicals, are readily available in *The Corridor.*

ACREAGE ON WATERWAYS—sites of various sizes, provided with soft, flowing water for processing.

LOW-COST POWER—abundant coal, oil, natural gas and electric developments assure unlimited power at low cost.

EXCELLENT TRANSPORTATION — favorable freight rates and dependable Chesapeake and Ohio service keep manufacturers and markets in economically close touch.

NATIVE-BORN LABOR — largely skilled men and women, many with textile experience; cooperative willing-to-work *Americans.*

PROXIMITY TO MARKETS — major consuming areas are within first to third morning delivery range of this territory.

FRIENDLY LEGISLATION — cooperating with industries already here and with those the states invite.

*— and a fine place to live!*

**THE CHESSIE CORRIDOR ★ *Served by CHESAPEAKE and OHIO LINES***

BEATS THE DUTCH!

AROOSTOOCRAT

Highest Quality POTATO STARCH

Made in AMERICA by EUROPEAN METHODS

UNIFORM QUALITY GUARANTEED

The big name in Starch today is AROOSTOOCRAT — the starch that equals, some say BEATS, the finest European product of yesterday. Made here by European methods and the same careful laboratory-controlled processing that has set a new standard of starch quality. AROOSTOOCRAT COSTS no more than ordinary starches—and is immensely superior and more economical than cheap starch. In quality and in UNIFORMITY it is THE starch today for the textile industry. Try it once and you'll use it always.

● AROOSTOOK POTATO PRODUCTS INC.

HOULTON, MAINE

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This Book will interest you . . .

I want to know WHY and HOW Aroostoocrat "beats the Dutch". So send me your booklet that describes its processing. Send me a copy TODAY.

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# Half Billion Dollars

## Has been spent on Army textiles to date

**TEXTILES** and textile products purchased by the Army Quartermaster Corps have cost approximately $500,000,000 since the start of the defense program, according to statement from the Philadelphia Depot. The actual cost for the first nine months of the current fiscal year, that is from July 1, 1940 to March 31, 1941, was $475,254,053. The remaining $25,000,000 represents purchases made prior to July 1, 1940, but which were part of the defense program buying.

Some idea of the effect of the program upon the Quartermaster's needs can be gained from the fact that the Quartermaster Corps spends between $10,000,000 and $20,000,000 on textiles and textile products during a normal year.

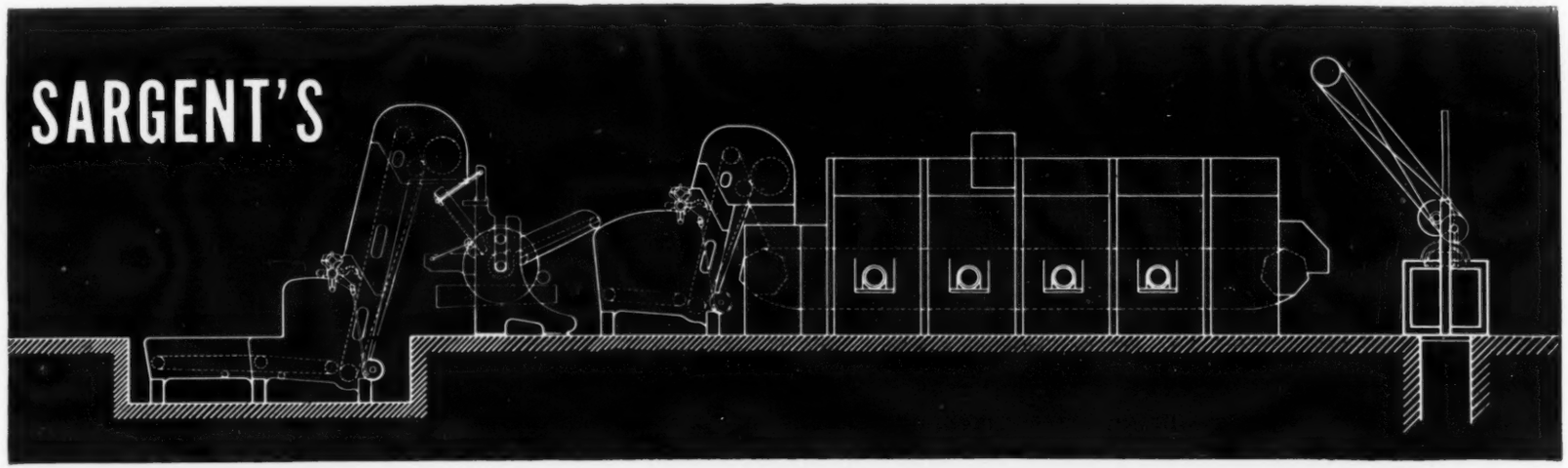
Even this half billion dollars, however, does not include all the textile purchases, since a number of items are not purchased through the Philadelphia Depot. For example, equippage such as heavy duck for tents, of which great amounts have been purchased at the Jeffersonville (Ind.) Depot, web belts, ammunition belts and bandoliers, machine-gun belts, haversacks, blanket roll packs, canteen holders, and many other items are purchased by the Ordnance Corps.

The following is a breakdown of the Philadelphia Depot's expenditures for the first nine months of the current fiscal year.

| Article. | Quantity. | Cost. |
|---|---|---|
| Wool cloth, yds | 84,702,921 | $69,490,942.70 |
| Cotton cloth, yds. | 92,111,444 | 43,272,289.47 |
| Other fabrics, yds. | 11,459,195 | 4,341,610.42 |
| Blankets | 6,546,250 | 40,917,255.00 |
| Bed sheets | 9,567,008 | 7,588,659.67 |
| Pillows | 1,303,520 | 712,778.94 |
| Mattresses | 1,495,308 | 5,558,729.56 |
| Raincoats | 2,941,514 | 12,317,134.70 |
| Canvas leggings, pr. | 6,213,084 | 4,323,918.33 |
| *Overcoats | 2,287,699 | 9,427,123.71 |
| *Mackinaws | 859,540 | 1,690,044.87 |
| *Field jackets | 2,015,851 | 6,631,070.54 |
| *Uniform coats | 5,652,984 | 22,248,282.10 |
| *Uniform trousers, pair | 5,994,868 | 5,022,927.60 |
| *Flannel and serge shirts | 9,121,992 | 4,729,936.52 |
| *Khaki shirts | 11,006,144 | 6,423,827.21 |
| *Working suits | 21,822,133 | 9,445,146.28 |
| Barrack bags | 3,631,000 | 1,664,854.95 |
| Socks, pairs | 63,278,382 | 10,792,904.45 |
| Gloves, pairs | 10,675,441 | 10,574,031.67 |
| *Field caps | 7,825,550 | 2,502,858.52 |
| Cotton underwear, units | 33,353,992 | 7,021,228.20 |
| Woolen underwear, units | 17,947,984 | 19,950,497.70 |
| Miscellaneous | ..... | 168,600,000.00 |
| Total cost | | $475,254,053.11 |

* Covers making-up cost by outside contractors.

Reports that the War Department or OPM is planning to ask weavers, processors, and cutters of cotton goods to report their inventories periodically, cannot be confirmed in Washington. . . . To speed final inspection of Army clothing purchases, the Quartermaster is allocating inspection duties to depots at Boston, Chicago, San Francisco, and Atlanta, in addition to Philadelphia, which has been carrying all the load. . . . The Army is marching 30 volunteer soldiers on a treadmill, testing the wearing qualities of shoes, clothing—and of the soldier. . . . A bill signed by the President authorizes immediate increase of Navy personnel of 232,000 in peacetime and 300,000 in war. . . . Calls for bids by the quartermaster on more than 20,000,000 yd. of cotton goods, was not, as it might have seemed, another "big haul." The lot was broken up in four items of twills, drills, and linings. General C. L. Corbin, chief of the QM Supply Division, told TEXTILE WORLD that this procurement is "findings" for finishing off odds and ends of projects.




PIT FEED, SQUEEZE ROLL, DRYER and BAGGER

***If it's raw stock***
***...let SARGENT handle it!***

This unit is fully capable of handling large quantities of Wool, Cotton or Staple Rayon. It is *continuous* and *mechanical* and *labor-saving... uniform* in *quality,* and *production* is *guaranteed.*

SERVING THE TEXTILE INDUSTRY FOR MORE THAN 85 YEARS!

## C. G. SARGENT'S SONS CORPORATION • GRANITEVILLE, MASS.

*Philadelphia Representative*
F. E. Wasson
930 Drexel Bldg., Philadelphia

*Southern Representatives*
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Fred P. Brooks, Atlanta, Ga.

## A 30-second Statement About Alkalies That May Put You Years Ahead in an Important Phase of Operation

ALKALIES are not just something to be taken for granted—*not any more.*

There are new developments in the use of alkalies that have an important bearing on processing methods in your industry — that affect definitely your ability to keep ahead of competition.

Solvay is in the forefront of this new activity, offering a technical service recognized as outstanding in the field.

Solvay technologists have not only done much of the research, they are also applying these findings in textile plants throughout the country.

We would be glad to give you full details on these new alkali developments. No obligations involved. Write or wire the nearest Solvay office.

60th ANNIVERSARY 1881 • 1941

**SOLVAY SALES CORPORATION**

*Alkalies and Chemical Products Manufactured by The Solvay Process Company*

**40 Rector Street** **New York, N. Y.**

BRANCH SALES OFFICES:

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New Orleans • New York • Philadelphia • Pittsburgh • St. Louis • Syracuse

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# NEWS ABOUT MEN

**Clifford B. Hayes** and **E. Dean Walen** have been named vice-presidents of Pacific Mills. Mr. Hayes will have charge of all southern manufacturing operations of the company, which will include the gray cloth mills of the Hampton Division at Columbia, S. C., as well as the weaving and finishing plants at Lyman, S. C. He came to Pacific Mills over 17 years ago and has been general superintendent of the Lyman Division since 1927. Mr. Walen will have charge of the operations of the Worsted Division, which has its plants at Lawrence, Mass. He joined Pacific Mills in 1921, as manager of the Cotton Research Co., jointly controlled by Pacific and Lockwood, Greene & Co. In 1924 he went to the Pacific plants in Lawrence, where he has been general manager of the worsted division since 1932.

Clifford B. Hayes

E. Dean Walen

**Walter S. Montgomery,** of Spartan, Gaffney and Startex Mills, has been elected president and treasurer of Beaumont Mills, succeeding **D. L. Jennings,** who is retiring after 36 years of service. A program of modernization is soon to be undertaken by the mills.

**Robert A. McMillan** has succeeded **A. G. McMillan** as president and treasurer of the Talladega (Ala.) Cotton Factory, Inc.

**Ernest Glaesel** is president of the new Luray (Va.) Textile Corp., which was chartered with a capital of $200,000.

**G. G. Taylor** was elected president for a second term at the recent annual meeting of the Canadian Association of Textile Colorists and Chemists. Others re-elected were: Honorary president, **E. Bradley;** past-president, **J. P. Redston;** vice-president, **E. N. Fidler;** secretary-treasurer, **William King.**

**Fred A. Krafft,** head of labor relations of the American Viscose Corp., has been named one of the standing Committee of Industry Consultants on Industrial Relations, which has been appointed by the Labor Division of the Office of Production Management by Sidney Hillman, associate director-general.

**James A. Huff,** for 36 years with Rockwood (Tenn.) Hosiery Mills, has been recently made president and general manager. His son, **Wood Huff,** was elected to succeed his father as assistant general manager and treasurer. Other officers elected were **Garnett Andrews** and **J. L. Tarwater,** vice-presidents, and **Polk Wright,** secretary.

**W. H. Suttenfield** has resigned, effective July 1, as treasurer of Superior Yarn Mills, Statesville, N. C., to become affiliated in a general capacity with American Yarn & Processing Co., Mount Holly, N. C. **T. H. McKinney** continues, of course, as general manager of American. Mr. Suttenfield will be succeeded at Superior by **C. K. Torrence,** formerly secretary-manager of Ozark Mills, Inc., and more recently of the cotton brokerage firm of Gulick & Torrence. The offices of Superior Yarn Mills will be removed to Mount Holly. **R. L. Stowe** is president and **Grady Rankin,** vice-president.

**R. G. Knowland,** vice-president in charge of manufacturing, will be on leave from Bigelow-Sanford Carpet Co., for work as chief of district offices of the Defense Contract Service of the Office of Production Management, Washington. He will have the direction of operations of the 36 field offices of the defense contract service.

**"We want precision! We want speed!"** That's America's order to U. S. industry, and *your* order to your plant.

You know that workers need maximum light for *fast,* accurate results. Yet it takes costly time to put on a two- or three-coat paint job. Time you can ill afford. You need a mill white that will do the job in double-quick time.

You need DULUX High-Hiding Mill White . . . because it does most repaint jobs with ONLY ONE COAT!

With DULUX the paint crew goes down the line once. Production returns to normal much faster than if several coats were needed. You save plenty on material and labor costs with DULUX, too.

Your workers get brilliant light reflection with DULUX because of its intense whiteness. And because it stays cleaner and resists yellowing, DULUX *keeps* its brilliant whiteness. This durability of DULUX means a longer time between repaintings, greatly reduced paint overhead. Find out more about DULUX High-Hiding Mill White.

**SEND IN THE COUPON FOR COMPLETE INFORMATION...**

USE DU PONT REG. U. S. PAT. OFF. DULUX REG. U. S. PAT. OFF. HIGH-HIDING MILL WHITE

E. I. du Pont de Nemours & Co. (Inc.)
Finishes Div., Dept. T-51, Wilmington, Del.

Please see that I get complete information about DULUX High-Hiding Mill White.

Name .....

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He had always been about as good as they come but the management didn't realize he was working under the handicap of an unsatisfactory water supply. Sometimes the whites were off: colors didn't match: re-dyes were necessary and spoilage ate into net profits—not to mention the excessive use of soaps, oils, detergents, etc., to counteract poor water. *But now things are different!* . . . . Ever since he "sold" the boss on the idea of installing a

**HUNGERFORD & TERRY WATER PURIFICATION SYSTEM**

the dye and finishing departments are turning out the kind of goods that bring top price even against keen competition—all because the H&T System supplies them with 100% soft, clear, iron-free water . . . Perhaps your plant is up against the same thing. If so, our engineers will give you an accurate estimate on correcting the trouble. . . . If not, they say "good-bye" without leaving a bill for services. . . . Write us.

**HUNGERFORD & TERRY, INC.**

WATER PURIFICATION PLANTS DESIGNED
INSTALLED *and* GUARANTEED
CLAYTON, NEW JERSEY


## NEWS ABOUT MEN

**J. O. Precourt** is the newly elected vice-president of January & Wood Co., Maysville, Ky. He has since 1932 been in charge of the Chicago sales office of the company.

**Francis S. Nettleton,** general manager of Hockanum Mills of M. T. Stevens & Sons Co., Rockville, Conn., was given a dinner April 15 at the Hotel Bond, Hartford, Conn., in honor of his 40 years' service with the mills. First employed in Hockanum in 1901 as a designer, Mr. Nettleton worked his way up until he was appointed general manager in 1934 when the mills were absorbed by the Stevens company. Besides his business interests, he is a member of Connecticut Board of Education.

**Charles Carvin,** vice-president and sales manager of Industrial Rayon Corp., Cleveland, Ohio, has been elected president of the Denier Club, New York. **John Holmes** of Celanese Corp. of America is vice-president, **John Wilmerding** of American Viscose Corp., is secretary and **H. A. Chapell** of American Bemberg Corp. is treasurer.

**Edmund Wright,** retired for some years from Edmund Wright Ginsberg Co., New York, has re-entered the factoring field, becoming vice-president and credit manager of Standard Factors Corp.

**Waldo Grose,** sales manager of Women's Wear Division of Botany Worsted Mills, New York, has been made a director of the company.

**Fred Mallinson,** of Canada, selling agent of the yarn departments of Dominion Textile Co. and Cottons, Ltd., and resident director in Canada of Mallinson's, Ltd., Manchester, England, visited the Knitting Arts Exhibition last month sporting his frock coat and top hat wherewith he perpetuates the time-honored custom of British commercial travelers.

**John Caughman,** formerly assistant superintendent of Startex Mills, Tucapau, S. C., has been appointed general superintendent of Spartan Mill, Spartanburg, S. C. **W. M. Allison,** has been promoted to assistant superintendent of Startex, succeeding Mr. Caughman.

**Jacques Errera,** distinguished Belgian chemist and formerly professor of physical chemistry at the University of Brussels, has been appointed manager of the Research & Control Division of Sidney Blumenthal & Co., Shelton, Conn., Dr. Errera possesses

Jacques Errera

thirteen decorations from governments of various countries including Belgium, France and Holland. He was Belgian delegate at the Internation Cancer Congress of Paris in 1939.

**Dr. Luther B. Arnold, Jr.** has been transferred from the Technical Laboratory of the Organic Chemicals Department, E. I. du Pont de Nemours & Co., Wilmington Del., to the Technical Division of the Rayon Department, Richmond, Va.

**William Stafford,** general manager of Algonquin Printing Co., Fall River, Mass., has resigned. He was formerly connected with Glenlyon Finishing Co., Pawtucket, R. I. The Algonquin company is being liquidated. Mr. Stafford has no immediate plans.

**Miss Gay S. Walton,** advertising director of Julius Kayser & Co., New York has been elected first vice-president of the newly formed Alumni Association of the New York School of Fine & Applied Arts.

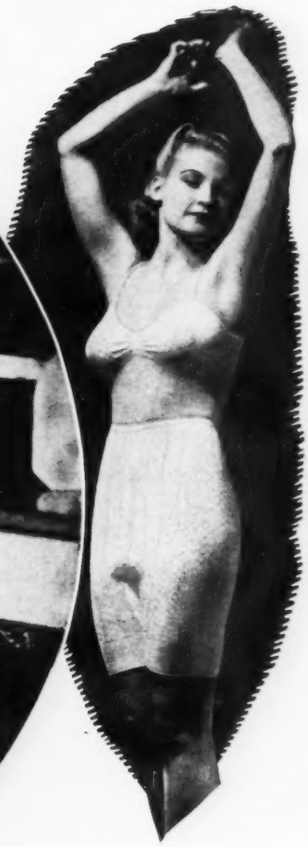
**Lawrence A. Churchville,** lately of Shawmut Woolen Mills, Stoughton, Mass., is now general superintendent of Seneca (N. Y.) Knitting Mills. He was tendered a testimonial dinner before leaving Shawmut.

**E. O. Pirkle,** in charge of finishing at Davenport Hosiery Mills for 16 years, and **Rhys Cooper,** in charge of designing and planning at Artcraft Silk Hosiery Mills, have joined Burlington Mills Corp's hosiery division, Greensboro, N. C., in similar capacities.

**E. L. Whitford,** formerly superintendent of Peerless Weaving Co., Pawtucket, is now superintendent of the rayon division of Warwick Mills, West Warwick, R. I.

**Martin P. Glynn** has joined the Yarn Sales Department of Celanese Corp. of America. He was formerly sales manager of

# The PACE-SETTER for flat seaming work on knit underwear



# UNION SPECIAL'S FIFTY-TWO-EIGHT

CUSTOMERS' records reveal consistent production increases ranging from 18% to 35%, or more, for the new Union Special CLASS 52800 machines, as compared with previous machines. At this rate, the equipment is soon able to pay for itself and then go on to produce major savings for its owners. This is due both to higher operating speed and better handling of work with FIFTY-TWO-EIGHTS. All styles are easy to adjust for different weights and types of fabric; all use the same style cloth plate, and all attachments are mounted on a swing-out bracket. Machines are readily convertible from one style to another — often an invaluable feature when rapid shifts in garment styles are taking place! Standard styles are listed below. For complete information and samples of work, just drop us a line. UNION SPECIAL MACHINE CO., 432 N. Franklin St., Chicago, Ill.

*Check for INFORMATION*

☐ STYLE 52800 B — A three needle machine (illustrated in circle) for attaching cuffs to union suits, etc. It produces the one operation lap seam Type FSa-1 with the 5-thread Interlock stitch, Type 605. Features off-set differential feed and most efficient type edge guides.

☐ STYLE 52800 D — For general, heavy and medium weight seaming. It has the tandem differential feed and a three-section bottom presser foot. Otherwise, same as 52800 B.

☐ STYLE 52800 E — A two-needle machine for attaching split-tube borders to necks and armholes of athletic shirts, and for making built-up shoulder straps. The construction of the feed dog, throat plate and presser foot, together with the intermittent strip tension insure a well-shaped neck with a better appearing stitch.

☐ STYLE 52800 F — Similar to 52800 E but intended more as an all-purpose machine. Attaches split-tube borders in finished widths of ½", ⅝", ¾", ⅞" and 1".

☐ STYLE 52800 G — A two-needle machine especially well suited for attaching lace or knitted tubing.

☐ STYLE 52800 H — For attaching collarettes to knitted undergarments with the 4-thread Interlock stitch, Type 602. Handles long length rib knit strip cut either parallel or perpendicular to wale.

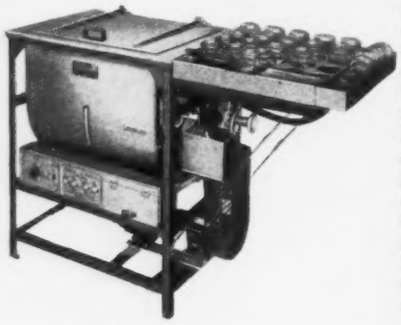
☐ STYLE 52800 J — Specially designed to perform the second part of the two-operation process of attaching garment length collarettes to knitted underments.

☐ STYLE 52800 K — Similar to 52800 H but makes the 5-thread Interlock stitch, Type 605. Offered in standard gauges, No. 14 and No. 16 for standard finished widths of ¾", ⅞", 1" and 1¼".

Name ..... Address .....

## ATLAS OMETERS AND THE THREE R'S

America's beloved humorist, Will Rogers, once remarked that "We are all ignorant, only about different things." Happily, this sage remark need not apply to anyone in the textile and dye industry when light and wash-fastness are involved, for the Atlas Fade-Ometer and Launder-Ometer provide rapid, reproducible and reliable information regardless of where or when the tests are made.



*Type LHD-EF Launder-Ometer with B-1 Preheating Table*

One of the advantages of the great standardization movement is the rapidity with which the veriest tiro may catch up with his more experienced contemporary. To meet standards requires testing equipment, in which field Atlas has been predominant for a quarter century. Atlas Ometers are stipulated by A.A.T.C.C., A.S.T.M., etc., which in turn represent the collective thinking of American industrial, governmental and academic institutions. Obviously, you can't go wrong by going Atlas.

**ATLAS ELECTRIC DEVICES CO.**

371 W. Superior St. Chicago



*Compare!* **point for point and you'll use**

# SHAMROCKS

**MEESE, INC. Madison, Ind.**

**SEND US your new catalog**

Name_____

Address_____


## NEWS ABOUT MEN

Mr. and Mrs. Albert L. Butler, Jr. pose for a picture on the Waikiki Terrace of the Halekulani Hotel, Honolulu, where they are spending their honeymoon. The bride was Miss Elizabeth Hill Bahnson, daughter of Mr. and Mrs. A. H. Bahnson. The wedding took place on Feb. 22 in Winston-Salem, N. C., where the young couple will make their home. A. H. Bahnson, the bride's father is president of the Washington Mills. The groom's father, A. L. Butler Sr., is vice-president of the Chatham Mfg. Co. with which Albert Jr. is connected.

Imperial Rayon Co. and for some years associated with Cannon Mills.

**Louis J. Othote,** J. W. Valentine Co., New York, has been elected president of the Lowell Textile Institute Alumni of New York. **William J. Stein,** Harry Strauss & Co., is vice president, and **David Freedman,** Textile Testing & Research Laboratories, is secretary-treasurer. The out-going president is **Adolf J. Winkler,** Standard Testing bureau.

**Chas. A. Davis,** formerly vice-president and general manager of Spencer Mountain Mill, Ranlo, N. C., has become associated with the blanket mill of Marshall Field & Co., Draper, N. C.

**Harvey Saul,** for the last two years Director of Labor of Rhode Island and prior to that for 17 years personnel director of the United States Finishing Co., of Providence, R. I., was named on April 18 director of the employment relations department of the National Association of Manufacturers, New York, and secretary of the association's employment relations committee.

**John A. Foster,** instructor of engineering at New Bedford (Mass.) Textile School, was elected president of Delta Kappa Phi, national textile fraternity when the Supreme Council met in New Bedford, Mass., for its 20th annual convention. Other officers elected were: **Francis Tripp,** vice-president: **Kenneth S. Tripp,** secretary: **Elliot F. Borden,** treasurer. Mr. Foster succeeds **R. A. Watson** of Philadelphia. Other officers retiring with Mr. Watson are **B. F. Hull,** vice-president: **A. Ward France,** secretary: **William B. Williamson,** treasurer, all of Philadelphia, and all having served four years. The 1942 convention will be held in Lowell.

**Ralph A. Frissell,** vice-president and general manager of Frissell Fabric Co., Middletown, Conn., has been elected secretary of the company to succeed **Irving C. Schaefer,** who resigned to become assistant to treasurer of the new Andover-Kent Co. Mr. Frissell will continue to serve as vice-president and general manager also.

**A. C. Martin,** formerly with Judson Mills, Greenville, S. C., has become assistant manager of Laurens (S. C.) Cotton Mills.

**Francis Tripp,** graduate of the New Bedford (Mass.) Textile School, has been appointed instructor of chemistry, dyeing and finishing at that school.

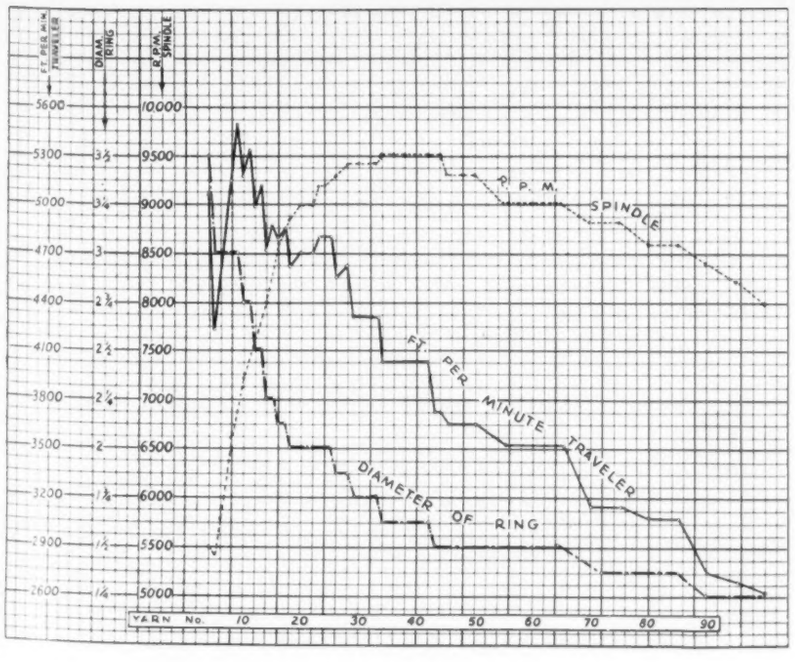
# PAWTUCKET RINGS

GIVE YOUR TRAVELERS A "TURN FOR THE BETTER"

*Vitritex finish*

CUT OUT AND KEEP THIS INFORMATION FOR PERMANENT REFERENCE

**This is number 6 of a series. Here you will find practical information of interest to users of rings**



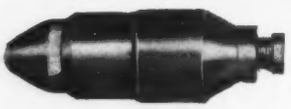

## A Graphical Study of Relationship between TRAVELER SPEED, DIAMETER OF RING, and SPINDLE SPEED

In order to use this chart to arrive at the recommended speed of the traveler for any number of yarn, the first step will be to locate the yarn number on the horizontal line as indicated. Then, by following the ordinate or vertical line over this number of yarn, one can successfully pick out the ring diameter, traveler speed, and corresponding spindle speed.

For example, assume that we are investigating the specifications for fitting up a frame to spin number 52's yarn. After the No. 52 has been located, and following the vertical line, it is found that a 1½" ring should be used, giving a traveler speed of 3650 feet per minute, and a spindle speed of 9300 R.P.M.

**PAWTUCKET SPINNING RING CO.**
*(Subsidiary of Saco-Lowell Shops)*
**Central Falls, Rhode Island**

# ANOTHER ATOMIZER?



**RIHCO Type B Atomizer**

**If by that you mean atomizer humidification—the finest kind—trouble free operation, low maintenance, and long life, then of course it's another atomizer.**

**If you mean the ordinary high power cost for atomizer humidifying, then the Type B is not just another atomizer for, as so many mills have learned, Rihco has found a way to save fifty cents of every dollar formerly spent for operating cost. Add to this, lower cost for installation or getting more humidifying from present equipment. That's why in so many mills it's Rihco systems.**

## R. I. HUMIDIFIER & VENT CO.

*Humidifiers since 1912*

**99 Chauncy St., Boston, Mass.**

**Aldrich Machine Works**
**Greenwood, S. C.**

**V. L. Sanderson**
**1710 Walnut St., Phila., Pa.**

**Canada: Canadian Textile Engineering Ltd.**
**980 St. Antoine St., Montreal, P. Q.**



## FOR TEXTILE MACHINERY

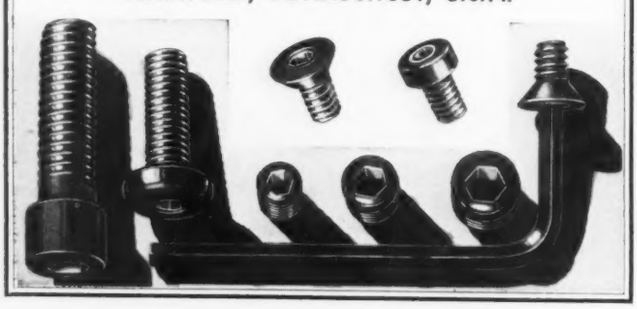
# ALLEN

## HOLLOW Hex Socket SCREWS

These specially-developed ALLEN Hollow Screws will cut your losses from *pulled threads*. Heads set perfectly flush with machine surfaces. No sharp edges to catch fabrics; screws are chamfered at the point, outside edge of head and top edge of socket. No slots to burr and pull threads; the internally operated hex key sets the screw easily, quickly and *tightly* without slippage.

Send specifications of diameter, length and thread or submit actual samples of screws you are now using. We will supply Allen samples developed for your particular application.

THE ALLEN MANUFACTURING COMPANY
HARTFORD, CONNECTICUT, U.S.A.




## NEWS ABOUT MEN

succeeding **Fred E. Busby,** who retired at his own request.

**William M. Clark,** former agent of the American Thread Mills of Holyoke, Mass., is now associated with the Atwood Machinery Co., Stonington, Conn.

**J. C. Ewing** has recently been appointed manager of Kendall Co., Camden, S. C., succeeding **A. Stanley Llewellyn.**

**H. Clay Sexton,** of New York, formerly with Corrigan, Osburne & Wells, consultants, has succeeded **Wm. J. Lambert** as personnel superintendent of Celanese Corp. of America at its Giles unit, Narrows, Va.

**Leroy B. Pitts** has been made sales representative for Renfrew Bleachery, Travelers Rest, S. C.

**Elbert Tripp** of Fairhaven, Mass., has been appointed textile technician for the Ashland Mills, Jewett City, Conn.

**Thomas Culver** has been appointed editor of the Berkshire Woolen Co. *News*, monthly publication of the Berkshire Woolen Co., Pittsfield, Mass. He succeeds **Duncan Malcolm.**

**James Potts,** Waynesboro, Va., has been elected manager of the Du Pont Recreation Building, local recreational center for operatives of E. I. du Pont de Nemours & Co., Inc., succeeding **Col. A. E. Tanner,** who has been transferred to a position in the service department. Mr. Potts was formerly business manager of the building.

**J. L. Adams,** formerly superintendent of Whitney (S. C.) Mfg. Co., has become plant superintendent of Beaumont Mfg. Co., Spartanburg, S. C.

**Mrs. Nannie Morris,** loom operator at Athens (Tenn.) Woolen Mills, has completed 48 years of active service with that organization.

**Marchant Cottingham** has accepted the superintendency of Inman (S. C.) Cotton Mills.

**Nelson N. Harte,** superintendent of Merrimack Mfg. Co., Huntsville, Ala., has resigned.

**W. E. McKinney,** superintendent of Elberton (Ga.) unit of Arnall Mfg. Co., has resigned. The veteran textile man, identified with the cotton mill industry for the last 58 years, said that he was going to catch up with some of the fishing he has missed since he became a sweeper in a small mill in Forsyth county at the ripe age of 11.

**Robert M. McCrary** is the new superintendent of Martinsville (Va.) Cotton Mills. He was formerly assistant superintendent of Williamston, S. C., plant of Gossett Mills.

**W. A. Black,** who has been superintendent of Beaumont Mills, Spartanburg, S. C., has been promoted to general superintendent.

**W. H. Connor** has resigned as overseer of spinning at Brookside Mills, Knoxville, Tenn., and has accepted a similar position with Gastonia, (N. C.) Combed Yarn Mills.

**Frank Senna** has been promoted from winding room overseer to carding room overseer at the Fisk Mill, New Bedford, Mass.

**D. H. Cauble** was recently named superintendent of Glen Raven (N. C.) Cotton Mills No. 2.

**C. L. Poole,** superintendent of J. W. Sanders Cotton Mill, Starkville, Miss., until recently, has become vocational instructor of the Parker High School, Greenville, S. C.

**L. B. Garvin** has resigned as night overseer of carding at Greenwood (S. C.) Cotton Mills, and taken similar position at Arkwright Mill, Spartanburg, S. C.

**Harold Williams,** formerly with Hillside unit of Callaway Mills, LaGrange, Ga., has been appointed overseer of the sewing room of the Elm City unit.

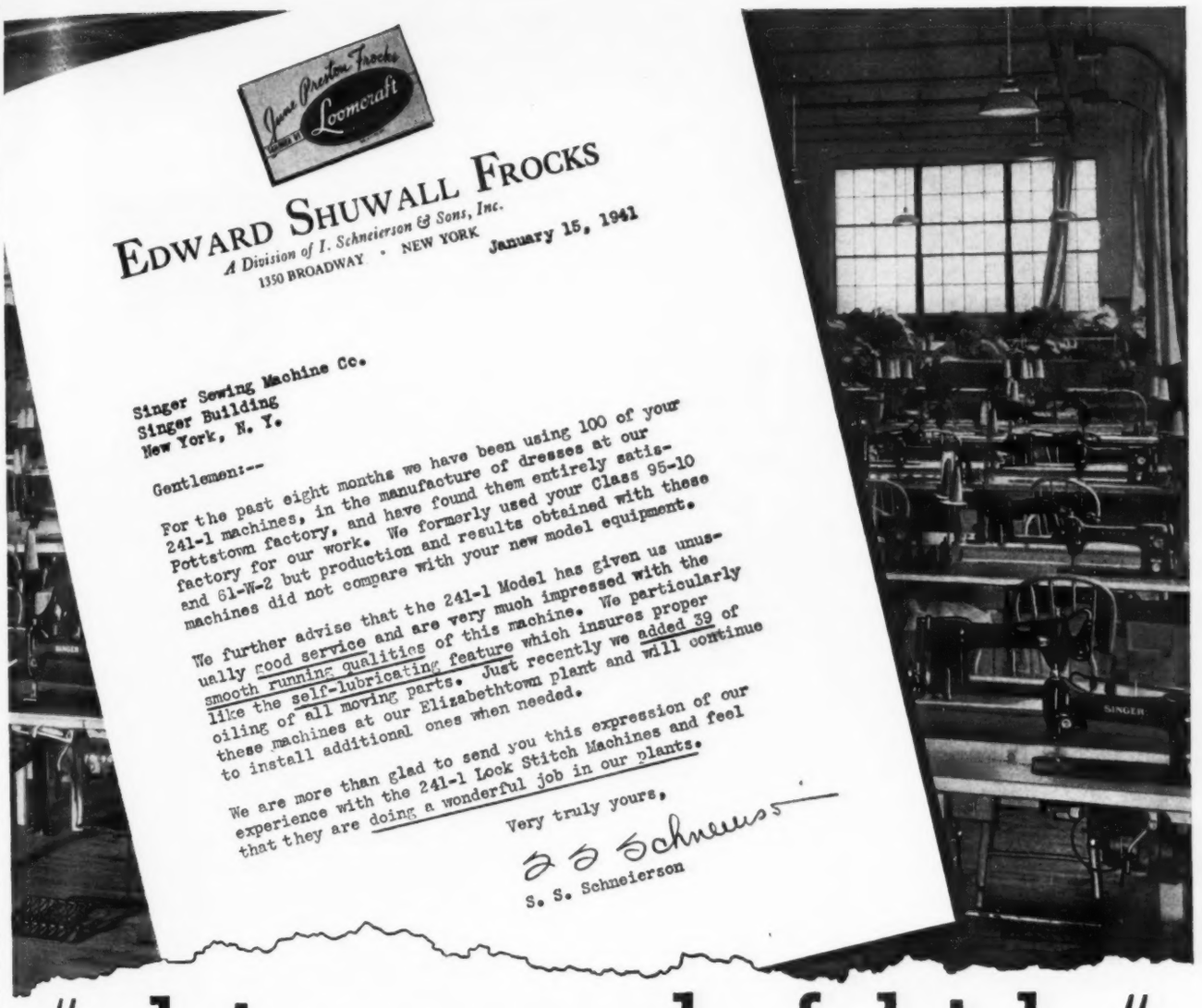
**Lofton K. Stuart,** formerly of Brownsville, Tenn., has been appointed assistant to the general superintendent of yarn preparation at Brookside Mills, Knoxville, Tenn.

**W. E. Williams** has become superintendent of Birmingham (Ala.) unit of Avondale Mills, succeeding **Carl Mangum,** resigned. Prior to joining Avondale Mills, Mr. Williams was superintendent of several of the units of Alabama Mills, Inc.

**R. H. Dancy,** of China Grove, N. C., has become assistant superintendent and overseer of carding at Green River Mills, Tuxedo, N. C.

**B. B. Snow,** superintendent of Bibb Mfg. Co., No. 2 unit, Macon, Ga., has been promoted to general superintendent of all of the company's units in Macon. **George D. Cross** has been promoted to assistant superintendent of the No. 2 unit of the company.

**E. E. Hill,** superintendent of the cake inspection department of 2-B textile department of the rayon unit of E. I. du Pont de Nemours & Co., Old Hickory, Tenn., left on May 1, to join the Nylon division of the company.



June Preston Frocks
Loomcraft

EDWARD SHUWALL FROCKS
*A Division of I. Schneierson & Sons, Inc.*
1350 BROADWAY • NEW YORK

January 15, 1941

Singer Sewing Machine Co.
Singer Building
New York, N. Y.

Gentlemen:--

For the past eight months we have been using 100 of your 241-1 machines, in the manufacture of dresses at our Pottstown factory, and have found them entirely satisfactory for our work. We formerly used your Class 95-10 and 61-W-2 but production and results obtained with these machines did not compare with your new model equipment.

We further advise that the 241-1 Model has given us unusually good service and are very much impressed with the smooth running qualities of this machine. We particularly like the self-lubricating feature which insures proper oiling of all moving parts. Just recently we added 39 of these machines at our Elizabethtown plant and will continue to install additional ones when needed.

We are more than glad to send you this expression of our experience with the 241-1 Lock Stitch Machines and feel that they are doing a wonderful job in our plants.

Very truly yours,

S. S. Schneierson

# "..doing a wonderful job.."

## AND AN ORDER FOR 39 MORE SINGER 241 MACHINES REAFFIRMS THIS OPINION

The above letter is but one of many received from manufacturers using the new high speed Singer class 241 machines. You, too, will find this outstanding machine an important factor in stepping up production and lowering costs in your plant.

Let us arrange a test of the Singer 241 in your own plant on your own work. Compare it job for job with any machine of its type and you will be convinced of its superiority. Contact the nearest branch of the Singer Manufacturing Trade Department and a test will be arranged without cost or obligation.

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**SEWING MACHINE COMPANY**
MANUFACTURING TRADE DEPARTMENT
149 Broadway, New York, N. Y.
*Branches in all principal cities*

SINGER SEWING MACHINE CO.
149 Broadway, New York, N. Y.

Please send me a copy of the illustrated folder describing the Singer Class 241.

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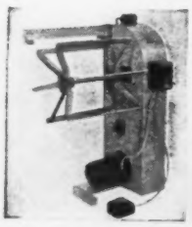
## with unique efficiency for ALL Kinds and Counts of Yarn

By this *new* twin-unit, single-operator method of skein reeling, FIDELITY machines quickly pay for themselves by savings that include time and floor space as well as cost. Result:—greater output per shift at a handsome saving—also less operator fatigue.

If increased output and savings interest you, send for Bulletin 361.

Single-end type for heavier yarns and shorter skeins; double-end type for yarns of finer count in longer skeins.



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The ideal tool for cleaning out slots in sinker and divider heads. Made in all gauges. Each one comes in a leather carrying case.

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# Obituary

**Edwin Henry Marble,** 87, president of Curtis & Marble Machine Co. and Fremont Casting Co., Worcester, Mass., and one of the foremost authorities in the world on finishing machinery, died at his home in Worcester April 16. Mr. Marble was born in Worcester, and attended Worcester Polytechnic Institute, working in the Curtis & Marble plant during his student period and later on a full time basis. In 1886 he was placed in charge of engineering work at the factory, and in 1895 was made vice-president, becoming president of C. & M., and also head of the casting company in 1910. He invented much important machinery and developed many textile processes, and his writings included a paper "Fifty Years of the Textile Industry," presented in 1930 at the semi-centennial of the American Society of Mechanical Engineers. He was a Fellow of the Textile Institute of England, a member of the Fabric Committee of the American Society for Testing Materials, and belonged to many other organizations. During the first World War he was chairman of the textile machinery section of the war industries board and also served the quartermaster department.

Edwin Henry Marble

**Robert F. Herrick, Jr.,** 47, vice-president of Scott & Williams, Inc., Laconia, N. H., and a director of the American Felt Co. and the Saco-Lowell Shops, died at the Phillips House of the Massachusetts General Hospital, Boston, on May 1 after a brief illness. He was a native of Milton, Mass., and was graduated from Harvard College in 1916. During World War I he was a lieutenant in the U. S. Navy, later serving with the British Grand Fleet. His interests were wide, and at the time of his death he was also vice-president of the Essex Wire Corp., Detroit, Mich., and of the Reed-Prentice Corp., Worcester, Mass.

Robert F. Herrick, Jr.

**Alfred Wolstenholme,** 60, president of the Thomas Wolstenholme Sons Co., Inc., Philadelphia, Pa., worsted yarn spinners, died April 12 in Bryn Mawr Hospital.

**Carl G. V. Sjostrom,** 82, president of the C. G. V. Sjostrom Co., Springfield, Mass., and formerly a dyer at mills in Woonsocket, R. I., Ware, Mass., and elsewhere, died on April 11 in North Wilbraham, Mass. He was a native of Sweden. He was a member of A.A.T.C.C., and widely known as a dyeing specialist.

**Charles Winfred Gaddy,** 60, superintendent of the knitting department of Wiscassett Mills Co., Albemarle, N. C., died at home early in May following several weeks illness. In 1899 he assisted in starting up the mill of which he was superintendent. For many years Mr. Gaddy contributed technical material to TEXTILE WORLD.

**W. T. Prescott,** partner in H. & P. Spool & Bobbin Co., Lawrence, Mass., died May 5. He began with U S Bobbin & Shuttle Co. in 1904, and helped found H. & P. about 10 years ago. He was a past-president of the Bobbin Association.

**Clifford D. Mallory,** 59, Greenwich, Conn., celebrated yachtsman and president of the Farr Spinning & Operating Co., of Holyoke, Mass, died in Miami Beach, Fla., April 7.

**Percy A. Legge,** 81, dean of the Philadelphia yarn trade, died April 9. His connection with this field extended over 50 years. He began his busi-

YOU MAY make textiles to adorn slim figures, or for less decorative service. But in either case, you can keep your own figures slim—cost figures—by using YARMOR* 302 in all wet processing.

YARMOR 302 saves time as well as money. And that's not all. It helps textiles pass the many critical inspections along the way from fiber to final customer.

You'll find details to fit your job in the two columns to the right. For further information write Department T-5.

## CUT TIME AND COST—IMPROVE RESULTS IN ALL WET PROCESSING WITH YARMOR 302

*Yarmor 302, When Made Soluble, Reduces Surface and Interfacial Tensions . . . Wets, Penetrates, Suspends, Disperses . . . Aids Detergents and Dyes . . . A Little Does a Lot and Does It Well*

**COTTON:** In the kier, Yarmor 302 brings the liquor in contact with every fiber, leaves uniform bottoms that dye and finish more evenly. Boiling time is cut. Fibers are softer, fuller, more resistant to age-discoloration.

**WOOL:** Yarmor 302 is valuable in raw-wool scouring . . . irreplaceable in fulling. From the raw stock it produces clean, soft, really white wool in prime condition for storage or further processing. In the fulling mill, it cuts fulling time as much as 30% . . . costs no more . . . helps you meet contract delivery dates on time.

**RAYON:** In boiling off, Yarmor 302 rapidly emulsifies gelatinous materials . . . is safe for the most delicate fabrics. Used in dyeing, it makes the fabrics wet out and sink quickly.

**DYEING:** Yarmor 302 makes dye liquor penetrate the hardest fibers and heaviest seams. It gives an even, level deposit of dyestuff of uniform depth throughout every fiber. Loose dyestuff and impurities are suspended for washing out completely.

**PRINTING:** In printing paste, Yarmor 302 wets pigments thoroughly, disperses them evenly, and holds them in suspension without agglomeration until the design is on the fabric. Designs are sharp, colors bright and clear, no specks are formed.

*Reg. U. S. Pat. Off. 00-64

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HERCULES POWDER COMPANY
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LESS EXPENSE—Do you know how leading bleachers economize with Star Brand?

**FIRST:** Star Brand's purity insures controlled release of the oxygen. (More bleaching action per pound of peroxide.)

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Busy mills save money as well as time with brilliantly clear, pure Star Brand. We're ready to serve you.

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DIRECT MAIL LIST SERVICE




ness career as a bobbin boy in an English cotton mill and came to this country in his early 20's to act as representative of both English and American spinners. His firm's business will continue as heretofore under the present partners C. H. Vanderbeck, Henry C. Legge, Edward Legge and A. E. Snyder.

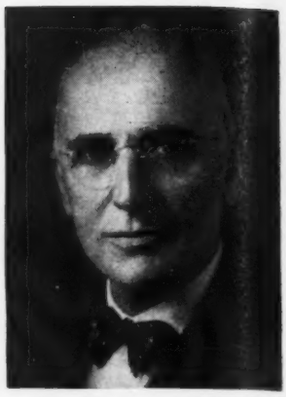
**Frederick K. Nixon,** 69, vice-president and general sales manager of Riverside & Dan River Cotton Mills, New York, died suddenly April 10. He was an outstanding figure in the styling and merchandising of wool goods, cottons and rayons for nearly 50 years. He was early associated with the American Woolen Co., but around 1902 went into business on his own account with the worsted mill agency of Nixon & Thickens. He later formed F. K. Nixon & Co. which soon became Nixon, Walker & Tracy. Mr. Nixon became selling agent for the United States Worsted Co., and five years later became sales manager of Worumbo Mfg. Co. In 1932 he joined Riverside in charge of cotton and rayon suitings and trouserings. He contributed a knowledge of men's wear styling to these products which made them outstanding in their field. He became general sales manager in 1939. He was a charter member of the former American Assn. of Woolen & Worsted Manufacturers, and was active in forming the Wool Institute.

**Clinton Alvord,** 75, former president-treasurer of the Worcester Loom Works, Worcester, Mass., died April 23. He retired two years ago.

**Edward Powell,** 90, founder in 1878 of one of Philadelphia's first seamless hosiery mills, died in that city April 22. The firm is the Powell Knitting Co. with plants in Philadelphia and Spartanburg, S. C. He was president and a director of the company.

**Charles C. Hardy,** 69, a textile machinery dealer at Boston, died in Winchester, Mass., March 27.

A MONUMENT in memory to the late A. B. Carter was erected by employees of Carter Mills Co., Lincolnton, N. C., recently. It was unveiled by the five grandchildren of Mr. Carter: Patricia Ann Gregg, Margaret Kempton, Martha Tula Carter, and Bynum Carter. The inscription on the monument reads: "In memory of Arthur Bynum Carter on this his birthday, April 14, 1877, erected by his employees April 14, 1941."



Frederick K. Nixon

**Fred H. Howe,** 83, cofounder and president of Rock River Cotton Co., Janesville, Wis., died March 22 in his winter home at Cocoa, Fla.

**B. Fenton Mack,** 63, president of Allentown (Pa.) Bobbin Works, died April 24 in Tampa, Fla.

**Walker Sanford Dunson,** 60, president and treasurer of Dunson Mills, LaGrange, Ga., died recently.

**John D. Dove,** 61, a former professor in the textile department of Georgia Tech., the first to make rayon from Georgia pine pulp, and the inventor of the multiple spinning machine, died in a Greenville, S. C. hospital April 4.

**Albert Henry Gledhill,** 81, retired wool manufacturer, died in Rockford, Ill., April 11. He was born in Huddersfield, Eng., and came to this country in 1902. He has been associated with mills in the eastern and middle-western States, most recently as superintendent with Janesville (Wis.) Woolen Mills.

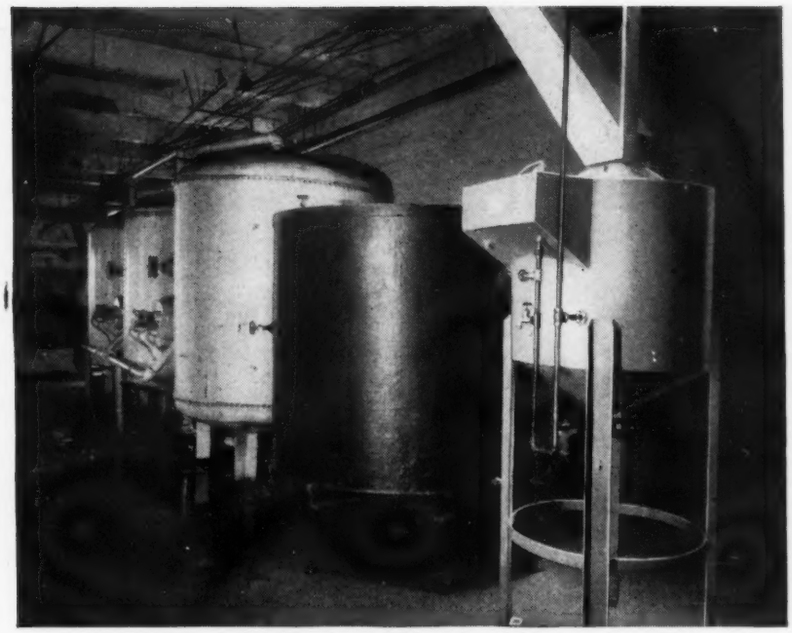
**Richard Haworth,** 65, president and treasurer of R. Haworth, Inc., dyestuffs, Providence, R. I., died suddenly April 17. He was born in Blackburn, England; came to America in 1897, and founded the company in 1923. He was a past-president of the Rhode Island section, A.A.T.C.C.

**Louis H. Baker,** 63, president and treasurer of the Dexter P. Lille Co., New Bedford, Mass., cotton and wool waste house, died on April 2. He succeeded the late Lucian B. Lillie as president a few weeks ago, and had been associated with the organization for about 40 years.

**Edward Lovering,** 77, vice-chairman of the board of Pepperell Mfg. Co., died at Palm Beach, Fla., April 22. From 1910 to 1926 when the company merged with Pepperell he was treasurer of Massachusetts Cotton Mills.

# *Pays its way*

## with advantages beyond *its* *4 basic economies*



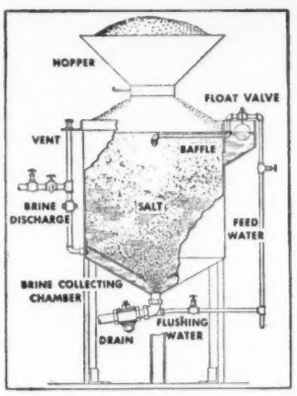
**CLINTON WOOLEN MFG.CO., Clinton, Mich.**

*The Lixate installation shown above is used by this company to produce Lixate Brine for dyeing. Lixate Brine is being used with success and economy for dyeing all types of yarns, and fabrics—woolens, cotton, rayon, silk and unions. Costs go down as quality improves, by the use of this accurate method of applying the salt exhausting agent to the dye bath.*

★ ★ ★

OF COURSE the chief advantages of The Lixate Process in any textile mill or wet processing plant are its big savings. Of these, the 4 most important are:

1. **Lower labor cost for handling salt.**
2. **No labor or power cost for mixing brine, lower costs of mixing salines with dyeing solutions.**
3. **Reduced distribution costs, for Lixate Brine can be pumped or piped by gravity to any part of the mill.**
4. **Savings of 10% to 20% in amount of salt required.**




In addition, where the dye exhausting agent now used costs more than the Sterling Rock Salt used in The Lixate Process, savings as high as 60% can be made in the cost of material alone.

All executives appreciate these savings. Operating executives like still better, the improvement in dyeing. Lixate Brine does help to secure more level dyeing. The salt is already in solution when put into the dye bath. It is dispersed completely and immediately, helping to avoid the concentrations of salt which drive excessive dye into fabrics and yarn. This also tends to eliminate streaks as well as spots. Uniformity of Lixate Brine gives a more accurate control over the quantity of salt in every vat, improving uniformity of shade. Lixate Brine also gives a softer, smoother and better feel and handle to goods.

Automatic operation is shown by the diagram. The recommended grade of Sterling Rock Salt is placed in a hopper or a storage bin above the Lixator and flows down by gravity. Water, under automatic control, enters through a spray nozzle at the top, dissolves the salt without agitation and becomes fully saturated brine, self-filtered and crystal clear. Brine rises in a collecting chamber, and flows to a storage tank.

Get the surprising facts about the use of Lixate Brine in dyeing, as well as in regenerating zeolite water softeners for textile processing. Write for a copy of The Lixate Book or, better still, ask to have a Lixate Engineer call and show you, with no obligation, just how you can make major savings in your own operations with Lixate Brine.

### • *ALL KINDS OF SALT!*

International Salt Company, Incorporated, which developed The Lixate Process For Making Brine, produces all types and grades of granulated or vacuum evaporated salt, flake or grainer evaporated salt, and Rock Salt. Salt knowledge and experience gained by more than three decades of operation, and by studies of The Research Department of International Salt Company, Incorporated, are shared with all who use salt. You are invited to submit any problem concerning the use of salt or salt brine, without obligation.

### • *A GOOD BOOK TO OWN!*

At what Salometer strength should salt brine be to withstand freezing longest? What is "eutectic" brine? These are but two of many questions answered at a quick look, by a reference to the brine tables in The Lixate Book. This book should be in every textile executive's working library. Write for a free copy today.

# *The* LIXATE *Process*

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*for making brine*

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SALES OFFICES: *New York, N. Y. • Buffalo, N. Y. • Philadelphia, Pa. • Boston, Mass. • Baltimore, Md. • Pittsburgh, Pa. • Newark, N. J. • Richmond, Va. New Orleans, La. • Cincinnati, O. • St. Louis, Mo.*

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# ANNOUNCEMENT

*The Manufacturers of*

## LEYLAND MYCOCK EXPANDERS

***now offer***

**$5.00**

**ALLOWANCE**

***on all old Expander Bars against the purchase of new Bars.***

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**Thomas Leyland Machinery Co., Inc.**
**Readville, Mass.**



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HUMIDIFYERS
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TEXTILE
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*for 25 Years*

Hundreds of installations in all types of textile mills in the U. S. and many foreign countries

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POSITIVE CIRCULATION · LOWER OPERATING COSTS

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troubles in the palm of your hand
When you use
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# TEXTILE MILL NEWS

## Cotton Mill News

**Anniston** (Ala.) **Yarn Mills,** owned by Broadalbin (N.Y.) Knitting Co., have been purchased by the Southern Mills Corp. which operates a plant at Oxford. Otto Latsh will be manager of the Anniston plant.

**Banning** (Ga.) **Mills** are installing new machinery to supplement equipment which had been left in the mill when it ceased operations some months ago. The mill has already been put back into operation. It was recently purchased by C. L. Upchurch & Sons, of Athens, Ga., and has been leased to new interests.

**Brookford Mills,** Hickory, N. C., plan an addition to the cloth room to cost $5,000.

**Caldwell Linen Mills Ltd.** is erecting a one-story addition to its plant in Iroquois, Ont., to be 131 x 140 ft.

**California Cotton Mills Co.,** Oakland, Calif., has let general contract to D. Mc Carthy Co., Oakland, for one-story addition, reported to cost about $50,000, with equipment.

**Canadian Cottons Ltd.,** are carrying out a $100,000 modernization of their plants in Cornwall, and spinning and twister frames, cards and cotton opening equipment are on order for the Milltown, Marysville and Stormont plants.

**Crompton - Shenandoah Co.,** Waynesboro, Va., has nearly completed a three-story making-up and warehouse building.

**Dwight Mfg. Co.,** Gadsden, Ala., is about to start construction of 2-story weave shed, 272 x 365 ft., to cost $1,800,000 including necessary equipment. J. E. Sirrine & Co. are the engineers. Two new units will ultimately be erected west of the main plant for a total increase in capacity of 60%. Contract for construction has been awarded to Daniel Construction Co., Anderson, S. C. About 20,000 spindles will be added an total cost will approach $3,000,000.

**Flint Mfg. Co.,** Gastonia, N. C., has purchased two high-speed Foster winders, Model 102, for the company's No. 2 Unit, to replace two winders, Model 101, that were transferred to the company's No. 1 unit to take the place of two older type frames being junked.

**Florence Mills,** American Spinning Co. unit, Greenville, S. C., are installing 26 new Whitin spinning frames.

**Fayette Mfg. Co.,** Fayetteville, Ga., was practically destroyed by fire April 15, sustaining a loss of $15,000.

**Inman** (S.C.) **Mills** have completed an addition to the cloth room, which gives the company 15,000 sq. ft.

**January & Wood Co.,** Maysville, Ky., has installed Abbott circulating-head automatic winders to replace old style spoolers. A new dyehouse installation consisted of equipment for both skein and package dyeing.

**Johnston Mfg. Co.,** Charlotte, N. C. has installed $100,000 worth of new machinery in three of its mills in the Carolinas: Johnston Mfg. Co., Worth Spinning Co., and Union Mills Co.

**Judson Mills,** Greenville, S. C., have leased seven double-deck Acme twisters from Whitin Machine Works, for five years with privilege of purchase.

**Lakedale Mills,** Fayetteville, N. C., formerly Faytex Mills, in receivership for six months, will soon be opened under the new name, with R. L. Huffines, Jr., manager.

**Longhurst Cotton Mills,** Roxboro, N. C., is constructing a one-story addition, for storage purposes.

**Mills Mill,** Greenville, S. C., plans expansion and improvements in mill No. 2 at Woodruff, S. C., including modernization in building and equipment, to cost about $80,000. This is part of recently announced development program.

**Nashawena Mills** New Bedford, Mass., will spend $30,000 in alterations and repairs to the roof of the four-story building at Belleville Avenue and Belleville Road. A new textile manufacturing concern will occupy the fourth floor.

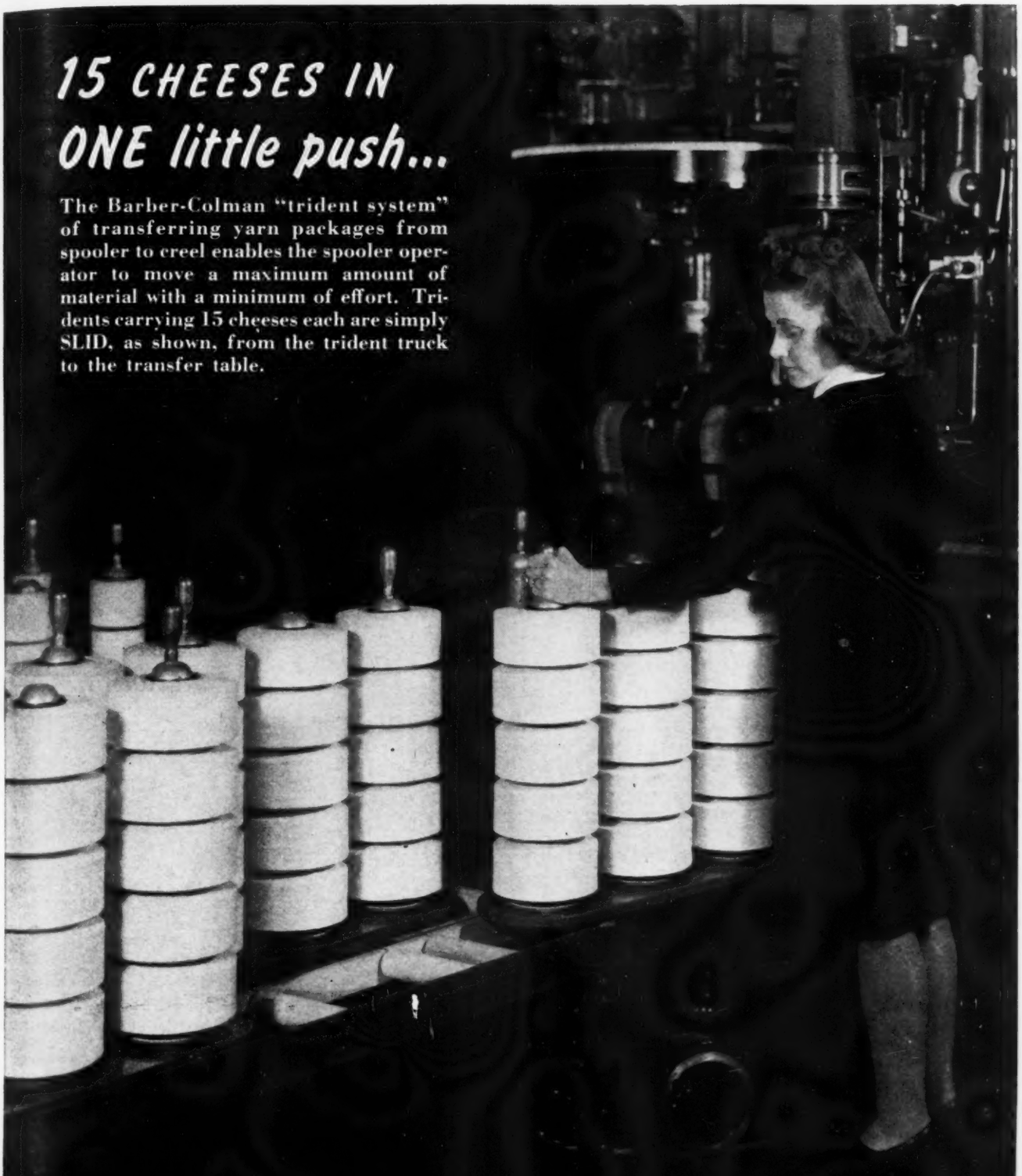
**New Haven** (Conn.) **Quilt & Pad Co.** will build three story, 46 x 74 ft. plant to replace building recently destroyed by fire.

**Queen City Cotton Co., Inc.** Burlington Vt., which has made cotton textiles for half a century, passed April 14 to the hands of the E. B. & A. C. Whiting Co. Officials of the latter firm said plans were indefinite. Sale price was $77,650. Purchasers manufacture fiber, including the recently developed Tulatex.

**Springs Cotton Mills,** No. 1 unit, Fort Mill, S. C., are

# 15 CHEESES IN ONE little push...

The Barber-Colman "trident system" of transferring yarn packages from spooler to creel enables the spooler operator to move a maximum amount of material with a minimum of effort. Tridents carrying 15 cheeses each are simply SLID, as shown, from the trident truck to the transfer table.



*The BARBER-COLMAN System of Spooling and Warping*

**BARBER-COLMAN COMPANY**

**ROCKFORD, ILLINOIS, U. S. A.**

FRAMINGHAM, MASS., U. S. A. • GREENVILLE, S. C., U. S. A. • MANCHESTER, ENGLAND • MUNICH, GERMANY

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**Large Stocks... Uniform High Quality... Immediate Shipment...** Principal products include—Alloy Steels, Tool Steels, Stainless Steel, Hot Rolled Bars, Hoops and Bands, Beams and Heavy Structurals, Channels, Angles, Tees and Zees, Plates, Sheets, Cold Finished Shafting and Screw Stock, Strip Steel, Flat Wire, Boiler Tubes and Fittings, Mechanical Tubing, Rivets, Bolts, Nuts, Washers, etc. Write for Stock List. Joseph T. Ryerson & Son, Inc. Plants at: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City.

Test by approved methods

Using * Scott Testers for tensile, flexing, burst, abrasion and other physical tests, you follow approved methods and obtain results in terms approved by societies, laboratories and Government Bureaus.

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NEW FIBRES AND PROCESSES



erecting 50 cottages in the mill village for operatives.

**Turnersburg** (N.C.) **Mfg. Co.** has been bought by Mr. and Mrs. C. V. Henkel of Statesville, N. C., and Robert R. Spilman of Knoxville, Tenn. The property includes a cotton mill which will be operated as the Rocky Creek Mills.

**Wilcox Lace Co.,** Middletown, Conn., has awarded contract for a 1-story brick addition, 30 x 80 ft., for office purposes. Eben J. Roberts, Middletown, has the general contract.

## Wool Mill News

**W. J. Dickey & Sons, Inc.,** Oella, Md., have asked bids on general contract for one-story addition, for expansion in finishing mill; also for improvements in present mill. Cost reported over $50,000, with equipment. Charles T. Main, Inc., Boston, Mass., is architect and engineer.

**Dustin Island Woolen Mills,** Penacook, N. H., plan rebuilding of one-story warehouse on Commerce St., recently damaged by fire.

**Forstmann Woolen Co.,** Passaic, N. J., has taken out permit for new one-story building, 110 x 165 ft., at Garfield, N. J., to be used for warehouse. Cost estimated about $65.000, with equipment.

**Homestead Woolen Mills, Inc.,** West Swanzey, N. H., will construct a two-story addition with 30,000 sq. ft. of floor space, for carding and weaving rooms. The firm has recently suffered loss by fire of two dye houses and a machine shop. Arrangements have been made with the Keene Silk-Fiber Mills to handle the dye work until the buildings can be replaced.

**Lowe Mill,** Huntsville, Ala., inactive for many years, may become active again as a woolen mill, if present negotiations are carried out.

**D. Mackintosh & Sons,** Holyoke, Mass., have installed new machinery. Several combers were put in last fall and now more combers and a new dryer are being installed. Bathelt Construction Co. is building the foundations for this new machinery.

**Mason Woolen Co.,** Burrillville, R. I.—Edward F. McElroy, Providence attorney, and Joseph Brown, a Woonsocket textile man, have been appointed permanent receivers of the Mason Woolen Co.

**Portland** (Ore.) **Woolen Mills** will erect one-story addition on North Baltimore St., for expansion in warehouse. Cost about $20,000, with equipment. C. C. Bardwell, has erection contract.

**Philippi** (W. Va.) **Woolen Mills** have been sold to R. A. Cross, president of Bloomfield (Ind.) Woolen Co. C. S. Taylor who has been operating the Philippi mills under rental for the last three years will continue in charge.

**Standard Felt Co.,** Alhambra, Calif., is erecting a drying room at 29 South Palm street, at a cost of $2000.

**Superior Felt & Bedding Co.,** Chicago, Ill., has taken bids for improvements in group of three buildings at DeKalb, Ill., to be occupied for mill. Cost reported over $50,000. A. Epstein, Chicago, is engineer.

**Thoburn Woolen Mills,** Almonte, Ont., is installing new Davis & Furber warper equipment with modern automatic stop mechanism, and two new automatic jack spoolers. Westinghouse fluorescent lighting has been installed in the weave room.

**Troy** (N. H.) **Blanket Mills** have begun erection of two one-story additions, 25 x 125 ft. and 67 x 100 ft., for which contract has been let to Brien Building Co., Inc., Woonsocket, R. I., to be used for expansion in main mill, and in dye house. Cost in excess of $100,000, including equipment. Charles T. Main, Inc., Boston, Mass., is architect and engineer.

**H. A. West & Co.,** Stafford Springs, Conn., have leased part of the New City Mill in Staffordville to manufacture baby blankets, necktie cloth, and shawls by hand weaving on 12 looms. Herbert A. West, Sr., in charge, was recently with Kentucky Loom Co., Louisville, Ky.

## Rayon & Silk Mill News

**Abbeville** (S. C.) **Mills,** rayon plant, has signed a contract for power from the new $500,000 municipally-owned Abbeville hydro-electric project.

**American Viscose Corp.,** Roanoke, Va., has completed improvements at local mill costing about $35,000, including a one-story laboratory addition and miscellaneous alterations in other departments.

**Burlington Mills Corp.,** Greensboro, N. C., has begun erection of one-story addition to branch mill at Mooresville, N. C. Cost estimated about $40,000, with equipment. Bar-

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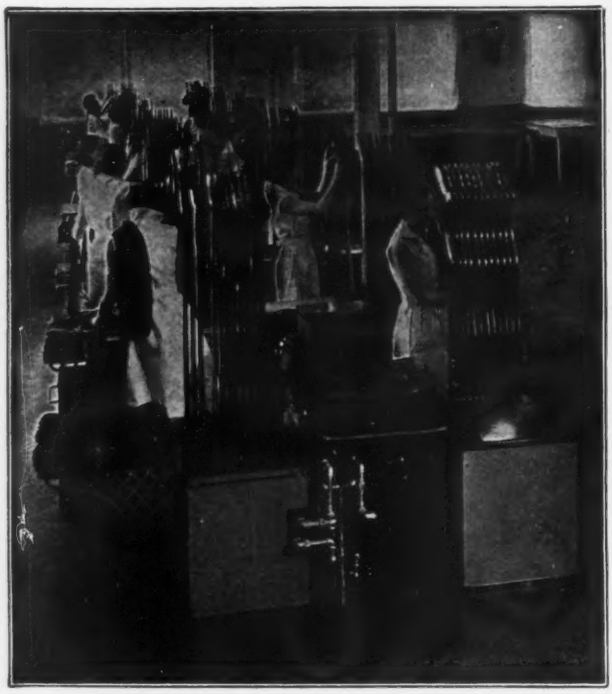

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ger Brothers, Mooresville, have erection contract.

**Cascade Rayon Mills,** Mooresville, N. C., has about completed two additions, costing $80,000. One is to the weave room, and the other to the warehouse.

**Albert Godde, Bedin, Ltd.,** Iberville, Que., in bankruptcy, has sold its plant to A. Wesley Mason of Montreal, Que., the new president of Louis Roessel & Co. Ltd. Specialized equipment for the manufacture of drapery fabrics will be added to the Iberville mill. The complete plant will consist of 66 looms, 2,000 twister spindles, and 500 doubler spindles.

**Keystone Silk Mills,** Lebanon, Pa., has bought the former Murphy Stevenson Co. building.

**Liebovitz & Son,** New York, have engaged H. I. Eiler. architect, Reading, Pa., to prepare plans and specifications for an addition and improvements to their textile plant in Mechanicsburg, Pa., estimated to cost more than $30,000 with equipment.

**Luxite Silk Co. of New Jersey** has taken over the former Progressive Silk Mill, West Hazleton, Pa., and is installing jacquard looms.

**Roanoke Weaving Co.,** Vinton, Va., is constructing a one-story warehouse to contain 12,000 sq. ft. of floor space.

**St. Johns** (Que.) **Silk Co., Ltd.,** plans one-story addition, estimated to cost $50,000, with equipment, to be erected during summer.

**Stanley, N. C.**—Former local mill of Katterman & Mitchell Co., has been purchased by new interests, headed by O. Max Gardner, former Governor of the State, and W. J. Carter, head of Carter Fabrics Corp., Greensboro, N. C., who will organize a new company to operate the plant largely on staple fibers. Plans are under way for large addition, and present structures will be completely modernized. Order has been placed with Whitin Machine Works for about 15,000 new spindles and other machinery; this number will be tripled at later date. Cost estimated close to $500,000, with equipment. J. E. Sirrine & Co., Greenville, S. C., are architects and engineers.

**Velvet Textile Corp.,** West Haven, Conn., is erecting one-story addition, about 45 x 125 ft., with two-story wing, 50 x 125 ft. Cost close to $75,000, with equipment. Harold Wakeley, Seymour, Conn., has contract.

**Wilson** (N. C.) **Mfg. Co.,** formerly manufacturers of hosiery, recently purchased by Sidney Blumenthal & Co., has been converted into a weaving plant, to supplement the company's present operations at Rocky Mount, N. C.

### Knitting Mill News

**Alabama Hosiery Mills, Inc.,** Decatur, Ala., plan an expansion program to cost $75,000 in order to increase production of Nylon hosiery.

**Bear Brand Hosiery Co.,** Henderson, Ky., plans installation of machinery for dyeing thread in Unit No. 7.

**California Rayon Corp.,** Los Angeles, Calif., has started up at 120½ East Ninth St., making rayon jersey of high twist crepe yarns. David S. Perry is in charge.

**Cherokee Mill,** Hickory, N. C., hosiery, is installing about 20 additional machines.

**Code Felt & Knitting Co. Ltd.,** Perth, Ont., has completed the extensive modernization of its plant.

**Colony Knitting Mills,** Mt. Airy, N. C., recently purchased by J. W. Brock and O. V. Radecky, is having new machinery installed for knitted sweaters and scarfs.

**H. E. Crawford,** Kernersville, N. C., manufacturer of hosiery mill supplies and accessories, has announced that installation of machinery for infants' hosiery, will soon be completed in the Kerner-Greenfield building, which had been recently remodeled, and that he and Sam F. Vance, local business man, would soon begin operations.

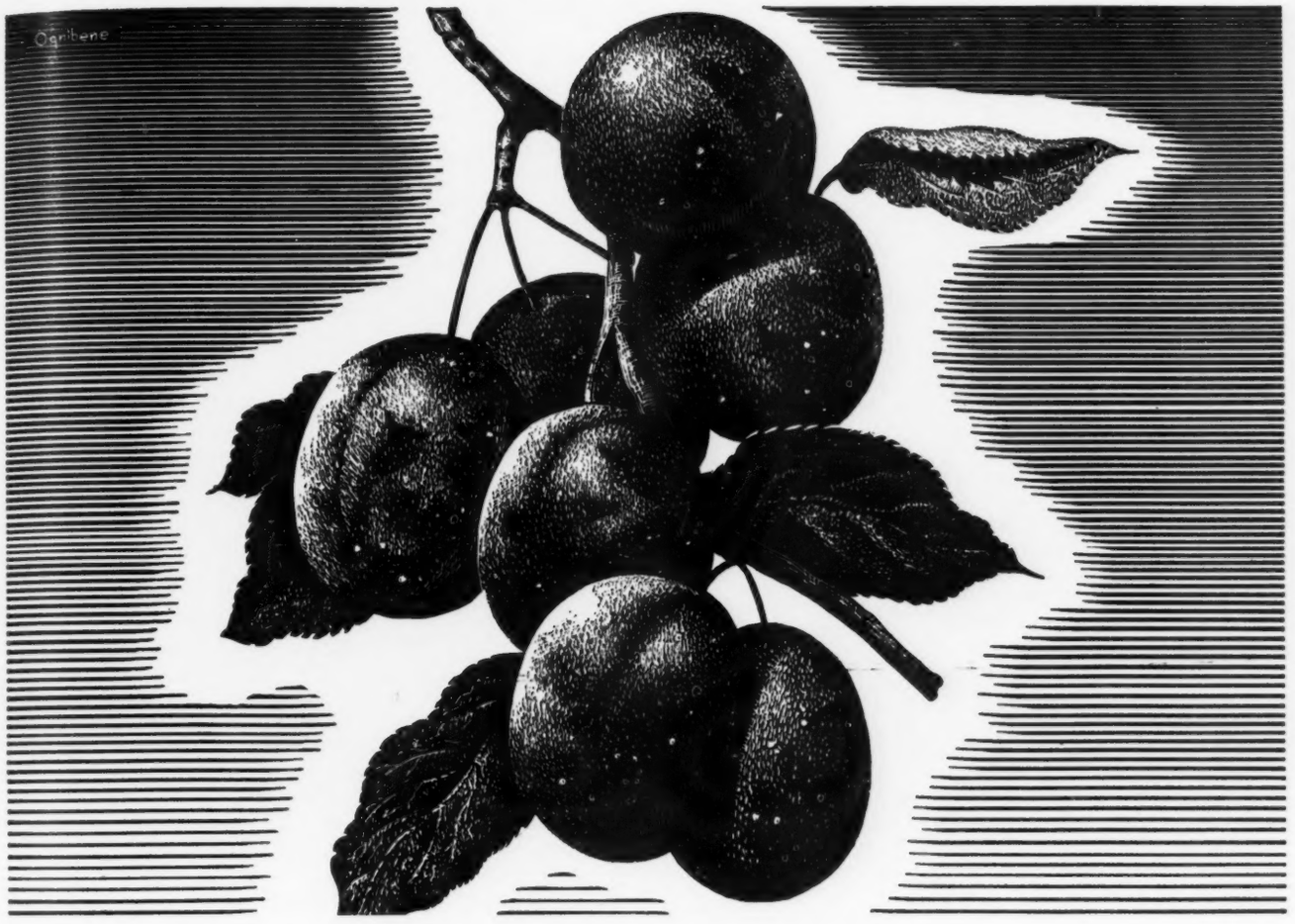
**Delaware Silk Hosiery Mills, Inc.,** Seaford, Del., are completing installation of additional equipment, including two 24-section leggers and one 24-section footer, and auxiliary equipment, and will place in service.

**Ellisville** (Miss.) **Hosiery Mills, Inc.,** are installing machinery in the building constructed last year. Operations are expected to begin soon.

**G. & H. Hosiery Mill,** Hickory, N. C., is constructing a combination warehouse and boiler-house addition, 30 x 50 ft.

**Georgia Knitting Mills,** Barnesville, Ga., sustained a fire loss recently, totaling about $15,000. Rebuilding is scheduled to be carried out at early date.

**Gloversville** (N. Y.) **Knitting Co.** has begun erection of two-story addition, 32 x 136 ft., to branch mill at Schenec-

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tady, N. Y., for which general contract was let to Shear & Gordon Co., Schenectady. Cost close to $50,000, with equipment.

**Hand Knit Hosiery Co.,** Sheboygan, Wis., has asked bids on general contract for a one-story and basement addition, 40 x 65 ft., for expansion in main mill department.

**Harnett Hosiery Mills, Inc.,** Dunn, N. C., were sold on April 22 to George L. Canaday, an official of the mill, for $1,152, under a court order by T. R. Hood, receiver.

**Maurice Hosiery Mills,** Thomasville, N. C., have completed an addition, and new machinery is being installed to double output of plant.

**Oscar Nebel Hosiery Corp.,** Verona, Va., is newly reorganized, with Harry E. Schoenut, Jenkinton, Pa., as president. Company is capitalized at $400,000.

**Overbrook Knitting Mill,** Marion, N. C., new industry, W. P. Elliott, owner and manager has completed the installation of machinery and started operations.

**Portage** (Wis.) **Hosiery Co.** has asked bids on general contract for one-story top addition, 60 x 118 ft., to present two-story mill.

**John Rems & Sons** plan construction of a brick, steel and concrete addition to their knitting mill in Locust St., Macungie, Pa.

**Rollins Hosiery Mills,** Des Moines, Iowa, is installing 10 new full-fashioned knitting machines as part of a $100,000 modernization move.

**Select Hosiery Mills, Inc.,** Hatfield, Pa., will erect one story, 66 x 140 ft. hosiery plant from plans by D. Dagit & Sons, Philadelphia, Pa.

**Sequatchie Valley Hosiery Mill,** South Pittsburgh, Tenn., will soon begin operations. The mill, formerly known as the Atlas Knitting Mill, operated by Lewis Tate and associates, was recently purchased by Gordon Hill and George Norman. It will be managed by John Samples, formerly with the Aycock Hosiery Mill, and will manufacture men's half-hose and slacks on about 40 machines.

**Viewmont Knitting Mill,** Hickory, N. C., is installing 10 additional machines to increase capacity nearly 50%.

**Craig Waters** has begun operation of a hosiery mill at Catawba, N. C., in a brick building on Main Street. He was associated with Elliott Hosiery Mill of the same place for a number of years. He has begun operations with 20 knitting machines.

**Wrenn Hosiery Mill,** Thomasville, N. C., is opening a looping department at Lexington, N. C., in charge of Foil Michael.

## Processing Plant News

**Armco Finishing Corp.,** Greensboro, N. C., has become a unit of the Burlington Mills Corp., and will operate in conjunction with other dye units controlled by the company.

**Bear Brand Hosiery Co.,** Henderson, Ky., is installing machinery for dyeing thread.

**Continental Dye & Print Works, Inc.,** New Haven, Conn., recently formed, will operate a plant in leased one-story building at Whalley Ave. and Fitch St.

**Equity Finishing Co.,** New York, N. Y., has been organized by Lou Bressler and Salvator Moreti to handle plain goods. Offices are at 48 Warren St.

**Fairforest Finishing Co.,** Clevedale, S. C., plans to extend its facilities 10 to 15%.

**Franco - Canadian Dyers, Ltd.,** St. Johns, Que., will make alterations and improvements in mill.

**French Dye Works, Inc.,** West Hartford, Conn., will occupy under lease a one-story building, 40 x 42 ft., to be erected by West End Realty Co., West Hartford, at 935 Farmington Ave. Wolf-Greenberg Co., Hartford, Conn., has erection contract. Cost reported about $24,000.

**Morschner Dye Works, Inc.,** Needham, Mass., has let general contract to George W. Holt, Needham, for one-story addition, 50 x 115 ft. Cost about $50,000, with equipment.

**Ontario Textiles Ltd.,** are being organized with head office in Toronto, Ont., to do textile printing. Firm will make stamped designs on cloth for needlework, for educational games, etc.

**Pacific Mills** will close its Lawrence, Mass., print works and consolidate finishing activities at its Lyman, S. C., plant. With completion of this change by the fall, Pacific will be producing only worsted goods in the North, and will be doing all its production and finishing of cottons and rayons in the South.

**Reliable Textile Processors, Inc.,** has been organized in Los Angeles, Calif., with a capital of $25,000; is represented by Henry Hanes, Union Bank Building, Los Angeles.